

**HOUSING AND THE MACRO  
ECONOMY: TAX REFORM  
AND  
ALTERNATIVE SUBSIDY  
POLICIES FOR HOUSING**

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## LIST OF ACRONYMS

CEE	Central and Eastern Europe
FHOS	First Time Home Ownership Program
GDP	Gross Domestic Product
GNP	Gross National Product
GOP	Government of Poland
HUDA	Housing and Urban Development Authority
IBD	Interest Buy-down
LTV	Loan-to-Value
MID	Mortgage Interest Deduction
MOF	Ministry of Finance
NBP	National Bank of Poland
NHF	National Housing Fund
PLN	New Polish Złoty
TBS	Towarzystwo Budownictwa Społecznego (Public Housing Association)
UIC	Urban Institute Consortium
U.K.	United Kingdom
USAID	United States Agency for International Development
VAT	Value-Added Tax

## **ABSTRACT**

This paper discusses two topics of immediate interest to the current policy debates in Poland: (1) the role of the housing and housing finance sectors in the macro economy and (2) alternative approaches to housing subsidy policy for owner-occupied housing, particularly in the context of the proposed reform of the tax system towards lower tax rates. The paper, which was prepared following a request to US Agency for International Development (USAID) from Deputy Prime Minister and Minister of Finance Leszek Balcerowicz, stems from ongoing discussions with the Government of Poland (GOP), especially the Ministry of Finance (MOF). It also draws from previous work undertaken by the Urban Institute Consortium (UIC), on behalf of USAID, for the Housing and Urban Development Authority (HUDA), the Polish Banks Association (PBA), the National Bank of Poland (NBP) and the Foundation for Mortgage Credit.

More specifically, it is based on material further developed in Patric Hendershott, "Taxing and Subsidizing Housing"; Sally Merrill, et. al., "Public Sector Housing Finance Strategies for Poland" and "Local Government Rent Policy and Best Practice in Poland: The Need for Rent Reform and an Improved Housing Allowance Program"; Stephen Mayo, "Housing and the Economy"; Douglas Diamond, "The Transition in Housing Finance in Central Europe"; Sally Merrill et. al., "The Feasibility of Estimating the Demand for Residential Mortgage Credit in Poland"; and M. Lea et. al., "Analysis of Contract Savings for Housing in Poland".

Poland's plans to undertake major reform of its tax system present an excellent opportunity to reconsider the goals and subsidy policies for the housing sector. In the first instance, a move toward a proportional tax system suggests elimination of the current large tax benefit to new construction, as well as certain other tax-related benefits. What might be preferred alternatives to this subsidy for owner-occupied housing, if any?

Although the authors were asked to comment on alternatives to the current system of tax benefits, the discussion of subsidy policy is best couched in a more complete assessment of the problems facing the housing sector in Poland and the major priorities for its reform. Thus, the paper considers both existing and alternative types of subsidies. No subsidy policy, however, is likely to have the desired effect in a housing sector that is burdened by distortions in pricing; rigidities in supply response, mobility, and tenure choice; and lack of an adequate legal and administrative framework. In this context, the key problems in the sector are also noted.

Key issues addressed here include the following:

- The important relationships between housing and the macro economy
  - The macroeconomic consequences of an inefficient, poorly functioning housing sector
  - Constraints to development of an effective housing sector, especially those imposed by policy legacies in transition economies
  - The key principles that guide effective and efficient housing subsidy policy, including realistic estimates of housing need
  - Housing subsidy alternatives for assistance to owner-occupied housing: direct grants and either an interest rate buy-down or a limited mortgage interest rate deduction

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# **HOUSING AND THE MACRO ECONOMY: TAX REFORM AND ALTERNATIVE SUBSIDY POLICIES FOR HOUSING**

## **1.0 EXECUTIVE SUMMARY: OVERVIEW AND RECOMMENDATIONS**

### **1.1 *Introduction***

This paper discusses two topics of immediate interest to the current policy debates in Poland: (1) the role of the housing and housing finance sectors in the macro economy and (2) alternative approaches to housing subsidy policy for owner-occupied housing, particularly in the context of the proposed reform of the tax system towards lower tax rates. The paper, which was prepared following a request from the MOF to USAID, stems from ongoing discussions with the GOP, especially the MOF. In addition, it draws from previous work undertaken by the UIC, on behalf of USAID, for the HUDA, the PBA, the NBP and the Foundation for Mortgage Credit.

Key issues addressed here include the following:

- ! The important relationships between housing and the macro economy
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- ! Constraints to development of an effective housing sector, especially those imposed by policy legacies in transition economies
- ! The key principles that guide effective and efficient housing subsidy policy, including realistic estimates of housing need
- ! Housing subsidy alternatives for assistance to owner-occupied housing: direct grants and either an interest rate buy-down or a limited mortgage interest rate deduction

#### **Outline of this Paper**

Poland's plans to undertake major reform of its tax system present an excellent opportunity to reconsider the goals and subsidy policies for the housing sector. In the first instance, a move toward a proportional tax system suggests elimination of the current, very large tax benefit to new construction, as well as certain other tax-related benefits. What might be the preferred alternatives to this subsidy, if any? In order better to address this issue the paper first establishes a sector-wide framework of inquiry for housing policy.

The remaining subsections of this Summary provide an overview of major issues in the development of Poland's housing and housing finance sectors. Section 1.2 examines the role of housing in the macro economy and Section 1.3 discusses the major issues in subsidy policy design in Poland. The advantages and disadvantages of three alternative types of subsidies to owner-occupied housing are discussed in Section 1.4; the two final sections summarize our recommendations.

Although the authors were asked to comment on alternatives to the current system of tax benefits, the discussion of subsidy policy is best couched in a more complete assessment of the problems facing the housing sector in Poland and the major priorities for its reform. Thus, the paper considers both existing and alternative types of subsidies to owner-occupied and rental housing. No subsidy policy, however, is likely to have the desired effect in a housing sector that is burdened by distortions in pricing, and rigidities in supply response, mobility, and tenure choice. In this context, the key problems in the sector are also noted.

Section 2.0 expands the discussion of subsidy policy to address in more detail the advantages and disadvantages of three potential subsidies to owner-occupied housing: a system of direct grants, a mortgage interest buy-down, and a capped mortgage interest rate deduction. Section 3.0 closes with a more complete discussion of the relationship between housing and the macro economy.

## **1.2 Housing and the Macro Economy**

The complex inter-relationships between housing and the macro economy impact the *growth* of both GDP and the housing sector, the *stability* of the economy, and the choices among Poland's menu of social goals for housing. The relationship is decidedly a two-way street. A well-functioning housing sector is certainly important to growth in GDP, and vice-versa. What is becoming increasingly clear, however, is that a poorly functioning housing sector will retard growth, especially through reducing labor productivity and limiting housing finance. Similarly, a volatile and poorly regulated sector, in the face of a property boom which develops into an asset price bubble, can contribute to collapse of the banking sector, potentially spreading turmoil throughout the economy.

Worldwide, it has been clearly demonstrated how a stable, low-inflation macroeconomic environment is fundamental to the health of the housing sector. Housing demand is a function of household income and the relative cost of housing and other goods, as well as the many factors determining household preferences. With the continued growth of real income, especially as consumers satisfy needs for other consumer products, housing demand can ultimately be expected to



accelerate in Poland. However, only with lower levels of real interest rates and continued expectations that the economy will not be subject to volatile economic or political shifts, can potential demand be realized as effective demand, with the housing finance sector providing the long-term funds necessary to promote a more rapid increase in housing supply.

**# The Importance of the Housing Sector.** The reverse relationship is also crucial: housing is extremely important to the macroeconomy. Housing's economic importance stems from its role as a major generator of income, through its links with numerous other industries, and as the major form of wealth in most developed countries. Housing plays a major role in the productivity of labor; labor mobility must be supported by an adequate housing supply, especially of rental housing, and a market able to respond to geographic shifts in demand.

In the business cycles of developed economies, housing is a "leading" sector—that is, increased investment in housing precedes an increase in GDP. This role for housing is not likely to apply during the economic recovery period of countries emerging from transition; in particular, much of the housing sector is not yet fully market-based in Poland. It may well be relevant in the medium-term future, however, when a more market-driven economy, including the housing sector, enters a post-transition "steady-state".

In addition, and less well understood, is the fact that as Poland's economy matures, effective housing finance will also be very important to the development of the financial sector and the capital market. Housing will become an increasing proportion of household wealth; a major component of household debt; and, as the banking sector seeks long-term funding for housing from the capital market, the collateral underlying important new types of bonds and securities.

**# The Negative Impact of a Poorly Functioning Housing Sector.** A poorly functioning housing sector, in any type of economy, will have detrimental effects on growth. The legacy of state control, however, has placed a special burden on the transition economies. A housing sector with continuing price distortions, and a sector plagued by unfinished reforms, will greatly hinder Poland's future development. Key among the constraints is a failure to adequately leverage private sector capital, both from households, many of whom do not pay an adequate share of income for housing, and from developers who have little incentive to invest in housing, particularly moderately-priced rental housing.

For a number of reasons, "effective" demand may understate, and lag, "potential" demand in transition countries, more so than in developed markets. The causes for this gap may include constraints on land supply; constraints on labor

mobility; tenure choice barriers; ineffective matching of households and units within the existing stock; and ineffective housing privatization policies. Under-utilization of housing finance due to lack of appropriate legal and administrative tools as well as lack of sufficient wealth for a down payment, conservative attitudes toward lending, and/or negative attitudes towards indebtedness, are also a problem.<sup>1</sup>

Finally, in any economy, as is being made clear from the financial crises which have swept the U.S., Scandinavia, Japan, and South Asia in the last two decades, a variety of problems in housing finance and real estate, together with regulatory and other failures, can contribute to economic collapse.<sup>2</sup>

In sum, a poorly functioning housing sector, including housing finance and its legal framework, will:

- ! Constrain the contribution of private capital and, together with rent control, hinder or eliminate the development of a private rental housing market
- ! Hinder economic growth, particularly through under-achievement of potential demand and limits on labor mobility (which is especially dependent on rental housing)
- ! Slow the development of the housing finance sector and therefore not only the housing market but also the financial sector and capital market
- ! Potentially exacerbate financial crises which stem from real estate bubbles
- ! Render subsidy policies less efficient, and more expensive, than they might be by subsidizing households who do not need help and/or failing to properly leverage household contributions toward housing

### **1.3 Housing Subsidy Policy in Poland: Summary of Major Issues**

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<sup>1</sup> For a discussion of barriers to effective demand for housing see Sally Merrill, et. al., "The Feasibility of Estimating the Demand for Residential Mortgage Credit in Poland" and Douglas Diamond, "The Transition in Housing Finance in Central Europe".

<sup>2</sup> See Michael Lea, "International Banking and Real Estate Crises: Lessons for Poland," prepared for the 1999 Winter Forum of the Polish Banks Association and Bertrand Renaud, "Property Cycles and Banking Crises: What Have We Learned?"



**# Efficient Subsidy Policies.** Every nation in the developed world (and most in the developing world) subsidizes housing. Thus, progress towards a market-based housing sector in Poland certainly does not imply an absence of subsidies. Rather, subsidy policies—whether they are aimed at demand or supply constraints, at new or existing housing, or at rental or owner-occupied housing—should both support development of the private market and seek to further a nation’s social goals.

In addition, the housing subsidy debate should not be focused solely on the amount of the subsidy but also on its effectiveness in meeting Poland’s goals for housing. Subsidy policies should be efficient—gaining as much as possible from each złoty spent; should be well targeted—not assisting those who do not need help; and should be supportive of, and not redundant with, private sector funds for housing—that is, not undertaking housing functions that the private sector will do on its own. Finally, subsidy promises should not be so expensive that they are unsustainable, as many countries have learned to their detriment.<sup>3</sup>

### **1.3.1 The Importance to Subsidy Policy of Establishing Realistic Goals for Housing in Poland**

Policy makers in Poland must establish realistic goals for the housing sector in order to design effective and efficient subsidy policies. Two “doses” of realism are especially important at this juncture in the reform process in Poland: (1) an appropriate measure of housing demand and afford ability must be developed in order to support a better understanding of housing “shortage” and (2) households must learn to accept that housing is expensive and therefore share adequately in paying for its true costs.

**# Housing Needs in Poland.** The approach traditionally used in Poland to estimate housing need—which is based on the “gap” between the number of households (now and in the future) and the number of acceptable housing units—implies that Poland suffers from an exceptionally large housing shortage. This approach distorts understanding of the housing sector and thereby distorts the approach to setting priorities in subsidy policy. In point of fact, Poland cannot now afford—either through state or household funds—to fund a massive increase in supply.

It is not evident to the UIC team that Poland has a large housing shortage, especially as compared with similar economies in the region and also with more

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<sup>3</sup> For a further discussion of criteria for subsidy design, see Section 2.0 and also “Public Sector Housing Finance Strategies for Poland”, op. cit.

market-based economies at similar levels of income.<sup>4</sup> While Poland may face shortages in some of the rapidly growing cities, particularly in rental housing, the UIC team believes that from the perspective of afford ability, the overall the shortfall is more limited than the “gap” approach implies. Many higher income households, using their own resources, will be able to realize their preferences. Thus, large subsidies at the top of the market may be an inefficient use of Poland’s state funds.

In contrast, stimulation of a private market in rental housing and assistance in afford ability would be of benefit to improving choice and supporting greater labor mobility. Reform of both rent control and housing allowance support are crucial to this effort. Furthermore, improved flexibility for matching of households and units in communal housing, and greater attention to rehabilitation, would improve utilization of the existing stock.

**# An Afford Ability Approach.** An approach to housing need which is more suitable to housing policy formulation—and one practiced internationally—is to determine what Poland’s households can afford for housing—using their own resources and the additional resources offered by state subsidies and, for those thinking of home purchase, with mortgage loans. *If Poland continues to base its subsidy design on the assumption of a severe shortage in the housing stock, especially of owner-occupied housing, the policies will be distorted and subsidy funds misdirected.*<sup>5</sup>

**# Household Contribution to Housing Costs.** Households in Poland are accustomed to paying a very small fraction of their income on housing, as compared to actual expenditures elsewhere in the world. In recent years, the rapid increase in utility prices has increased the gross rent-to-income ratio, but housing’s share in gross rent burden remains low. As one consequence of this legacy, the payment ratio in the housing allowance program is, on average, too low, based on comparisons with many transition countries as well as the developed world.<sup>6</sup>

**# Government Spending on Housing.** Poland already spends a considerable amount on housing subsidies. In addition to central government expenditures (0.6

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<sup>4</sup> For a discussion of Poland’s housing stock relative to that of similar countries, see Stephen Mayo, “Housing and the Economy”. Also, both the Czech Republic and Hungary may have now accepted that they do not have a large housing shortage, and have turned more attention to the afford ability needs of poorer households and young couples without housing; see Douglas Diamond, op. cit.

<sup>5</sup> For a more detailed discussion of this issue, see “The Feasibility of Estimating the Demand for Mortgage Credit in Poland”, op. cit.

<sup>6</sup> This is not to say that the poorest households should pay beyond their means, that is, threatening their ability to purchase other necessities. It is appropriate for the effort ratio to remain low for very low income households, but to increase with income (and possibly also decline with household size).



percent of GDP in 1998), must be added the amount in taxes foregone (estimated by the MOF to be PLN 2.6 billion in 1996, or 0.75 percent of 1996 GDP). One must also consider an unknown, but substantial, level of gmina expenditures on the housing allowance and other housing programs. Our estimates indicate that Poland spends as much or more than Hungary and the Czech Republic on central government housing subsidies.<sup>7</sup>

### 1.3.2 A Balanced Approach to Housing Support

As noted, Poland is currently considering a major overhaul of its tax system, including a reduction in tax rates with movement toward a proportional tax structure as well as simplification of the tax system through limitations on special deductions. In this context, the GOP wishes to consider alternatives to the present system of tax benefits to housing, particularly for construction of owner-occupied housing. We have summarized below (and provided further discussion in Section 2.0) some advantages and disadvantages of alternative subsidies to owner-occupied housing. However, before entering into the details of that discussion, we present our rationale for a balanced approach to reform and subsidization policies.

**# A Sector-wide Analysis.** A balanced approach to housing assistance requires attention to the existing stock as well as new construction, assistance to rental housing as well as owner-occupied, and consideration of both demand- and supply-side subsidies. Since we conclude that a large shortage of expensive owner-occupied housing may not be the predominant issue at present, subsidy design should be based on other criteria, such as labor mobility, support to rent reform, and development of the housing finance system. *In sum, a stronger focus should be placed on development of a private sector rental market (which requires rent and housing allowance reform), rehabilitation, housing finance, and supply constraints.*<sup>8</sup>

Major issues include the following:

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<sup>7</sup> These types of comparisons are made difficult by the fact that the structure of the subsidies in the three countries is quite different. Much of Poland's expenditure is in the form of taxes foregone, which is not true in the other countries. Nevertheless, if tax benefits are included (which they should be), Poland's expenditure of housing exceeds that of its neighbors. See Diamond, op. cit.

<sup>8</sup> The issue of "balance" has a number of additional perspectives. From a macroeconomic perspective, the cost of capital for housing must be considered relative to the cost of capital for other sectors of the economy. Also, in Poland as well as in most other economies, owner-occupied housing is well treated relative to rental housing. The imputed rents from owner-occupied housing are almost never taxed and in most countries, capital gains are only lightly taxed. This topic is further discussed in Section 2.0 and in one of the supporting papers to this document: Pat Hendershott, "Taxing and Subsidizing Housing".

- ! Attention to rental as well as owner-occupied housing is a key element of balance. Although this paper primarily addresses issues of subsidies to owner-occupied housing, development of a private rental housing market is very important to Poland. The need for mobility—better facilitated via rental housing—is a crucial consideration. As discussed above, policy reforms supporting development of a private rental market will be as important as subsidies in the long-term; these include, first and foremost, an improved housing allowance program. (As a hypothetical consideration, if budget limitations were to force Poland to choose between rental and owner-occupied housing assistance, the UIC team would choose rental housing at this time.)
- ! Both demand- and supply-side subsidies are important in the quest for balance. Supply-side subsidies have a direct impact on construction. However, since the subsidy is largely captured in the structure, the impact on mobility is lessened. Equity issues may also arise. In addition, worldwide, supply-side rental programs have been notoriously difficult to design; the issues include ensuring proper maintenance, future ownership rules, and the longevity of this stock. As a result, there has been a marked shift in most countries to reliance on demand subsidies. Demand subsidies are “portable” and thereby facilitate mobility. They also stimulate supply in an indirect fashion and leverage household funds, if designed with appropriate contribution rates. Demand subsidies can also be expensive, however, and inefficiently targeted.
- ! Housing finance lending will ultimately be more important than subsidies in fueling owner-occupied housing development. The market-based housing finance sector is a vital element in bringing private resources to bear through leveraging of household as well as developer funds. Subsidy policies and structural reforms which encourage the use of residential and construction loans, and which reduce real lending rates, must enter the balance with other state efforts.
- ! *Attention to the existing stock as well as new construction is vital.* As discussed elsewhere, the major backlog of capital repairs, unless addressed rather quickly, will continue to unnecessarily accelerate depreciation. Current policies are not, for the most part, directed at major capital systems; furthermore, the policy debates over rehabilitation have not yet produced viable, overall programs (thermal renovation is the only new exception).

#### **1.4 Evaluating Alternative Subsidy Policies for Owner-Occupied Housing**



**# The Current Tax Benefit for New Construction.** *The current large tax benefit to new construction of owner-occupied housing should be eliminated whether or not there is tax reform.* The outcome of such a large subsidy is to increase owner-occupied housing for high income households in a relatively rapid fashion. As noted above, this issue is not as pressing as a number of other issues. Moreover, this tax subsidy is likely to be inefficient in increasing supply: that is, many of these households would be likely to build new housing without assistance. Subsidies for owner-occupied housing should be targeted not to the highest income groups, but to those for whom the subsidy has an important *marginal impact in encouraging new housing*. Similarly, the VAT benefit should be eliminated (or capped) and the rehabilitation tax program replaced with a program more clearly targeted at the backlog of major capital repairs.

**# Alternative Subsidies to Owner-Occupied Housing.** Again, as noted above, it is not clear to the UIC team that major new subsidies are warranted for new construction of owner-occupied housing. If, however, Poland chooses to support owner-occupied housing, we have analyzed three alternatives to Poland's current system of major tax benefits.<sup>9</sup> The preferred alternatives are: (1) a targeted grants program and either (2) an interest "buy-down" or (3) a limited mortgage interest rate deduction.

Each of these alternatives has particular advantages and disadvantages, which are noted below and discussed in more detail in Section 2.0. We should also note our criteria for evaluation of the subsidies, also discussed at more length in Section 2.0. In summary, *efficiency* is defined in this context as achieving the most increase in housing per zoty spent; *redundancy* implies that the subsidy is simply supplementing or replacing actions that the private sector would take on its own; *horizontal equity* addresses equal access to benefits by similar households, while *vertical equity* looks at relative progressivity or regressivity; and finally, *administrative efficiency* refers to both cost and complexity and to the ability of the government to meet the targeting criteria with a minimum of fraud.

Many households in Poland are likely to be "liquidity constrained" – that is, they lack sufficient funds for a down payment and/or have difficulty affording monthly loan payments of a sufficient size for home purchase. Young households in particular may have little wealth for a down payment; also, when mortgage

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<sup>9</sup> As noted, although the emphasis in this paper is primarily on owner-occupied housing, and specifically alternatives to the current tax benefit, UIC has also analyzed Poland's other subsidy programs. Please refer to the UIC reports on Public Sector Housing Finance Strategies and Rent Reform, noted above, and also to Michael Lea, "Analysis of Contract Savings for Housing Systems in Poland."

payments are initially very high relative to income, the so-called mortgage tilt problem, Afford ability is more difficult in the early years of mortgage payments.<sup>10</sup>

The alternative subsidy policies have different goals, and thus are more or less useful depending on which problem(s) Poland is attempting to address. Two obvious goals are increased afford ability and increased new construction. These goals are certainly not mutually exclusive, but establishing priorities may ultimately be necessary because of budgetary constraints. With regard to afford ability, both the mortgage interest deduction (MID) and the interest buy down work through reducing the ongoing cost of a mortgage loan. A grant program, on the other hand, generally assists with the down payment. However, difficult choices have to be made as to whether the subsidies apply only to new construction, or to existing housing as well. Finally, the nature of the entitlement—universal entitlement for eligible households versus some other approach—and the schedule/timing implications for the budget must also be considered.

Each of these subsidy policies is briefly described below:

- ! **Direct Homeowner Grants.** Grants are generally structured to address the down payment constraint. Australia's grants program for young, first time home buyers has been shown to increase the home ownership rate among young households and to accelerate the time to first ownership.<sup>11</sup> Direct grants are also consistent with a flatter, simpler tax system.<sup>12</sup>

Many structural decisions would have to be made in designing the grants in order to fulfill the desired housing goals and not be prohibitively costly: for example, new housing only, or existing housing as well; new home buyers only, or all households eligible with regard to particular income and asset criteria; whether the subsidy is provided on a first come/first served basis, or some other manner of limiting total expenditures, and so forth. If award of the subsidy is controlled in some fashion in order to decrease cost, equity issues arise, (especially if the award system appears

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<sup>10</sup> See the discussion on liquidity constrained households in Hauren, Hendershott, and Wachter.

<sup>11</sup> See Bourassa, et.al., "Independent Living and Home Ownership: An Analysis of Australian Youth."

<sup>12</sup> Direct grants could also be administered as over time as well as down payment grants (as is done in Germany). The Australian program provided a choice, although 80 percent opted for the down payment subsidy. The differences between the over-time grant approach and the interest buy-down and the mortgage interest deduction are that it is not tied to the interest rate, would not necessarily encourage use of the housing finance system, and would probably not be administered through the banking system.

arbitrary). Finally, income verification, which would be especially important in the grant policy, remains difficult in Poland.

Thus, on the negative side, these considerations are likely to make grants administratively complex and potentially very expensive. Australia, for example, has recently ended its grant program, largely because of cost. It is not now used in many countries; Ireland provides an up-front down payment grant and Germany also utilizes an annual lump sum grant paid out over a number of years.

- ! **Interest Rate Buy-down.** Like the mortgage interest deduction, an interest rate buy-down (IBD) is a subsidy mechanism designed to help borrowers meet the cash flow requirements of a market rate mortgage. Buy-downs are utilized in Sweden, Finland, and Hungary. The buy-down addresses the liquidity constraint directly by lowering the initial monthly payment burden of the loan. It is a more efficient way to address this constraint than the flat interest rate subsidy because it takes into account that most borrower incomes rise over time.

The advantages of the interest rate buy-down are the ability to control costs through phase-out of the subsidy along with the ability to target the program in the same manner as the direct grant (as noted above the buy-down is a limited form of direct grant paid out over time). The size of the buy-down and the length of time over which it is phased out can be varied by income or other qualification criteria. The buy-down is much less costly than a flat interest rate subsidy (e.g., a fixed below-market interest rate over the life of the loan). It is also less burdensome to the budget because it is not paid out at once at the beginning of the loan period.

*In Poland, both the buy-down and the MID would have the very important benefit of encouraging the use of the housing finance system.* Especially in response to a drop in real rates, mortgage finance should eventually be far more heavily utilized than currently; this would leverage both the household's own funds and its subsidies, and speed-up the supply response to the demand for housing. As compared with the MID, the buy-down is compatible with simplification of the tax system. In addition, the banks can be used to administer the program, avoiding the creation of a large bureaucracy for the program. The buy-down approach allows the use of market-rate mortgages, which will be more attractive and less risky to banks than an interest rate subsidy.

A major disadvantage of the buy-down is the complexity of administration. It is more complex and costly to administer than a lump sum grant because it is paid out over a number of years. The complexity is increased if there are different depths of buy-down and/or length of buy-down period. The administrative complexity is somewhat reduced (relative to the lump sum payment) by enlisting the banks in the administration process. The other disadvantage of a buy-down is that it could lead to a somewhat higher default rate on the mortgages. If an increase in payments occurs at the end of the buy-down period that is greater than the relative increase in borrower income, the resulting increase in the payment burden could be too much for the household to bear. This risk can be controlled with the use of shallower buy-downs and tailoring the buy-down period to the expected income growth of the borrower.<sup>13</sup>

- ! **Mortgage Interest Deduction.** A mortgage interest deduction (MID) is one of the most widely used housing subsidies in developed countries: the U.S. and at least 12 Western European countries allow at least partial interest deductibility.<sup>14</sup> The MID is generally administered through the tax system and helps equalize the cost of housing between those who finance solely with equity and less wealthy households who require mortgage debt. As noted above, both a MID and a buy-down would encourage the use of mortgage finance in Poland.

The disadvantages of a MID include regressivity (which is lessened when the MID is capped) and political entrenchment. It has proved difficult to reduce the subsidy in the U.S., where the deduction is very generous. In contrast, however, European nations have been able to impose various limits.<sup>15</sup>

We suggest that a mortgage interest deduction be carefully limited. A capped approach will reduce the regressivity of the subsidy, and will

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<sup>13</sup> The complexity of the buy-down might risk being exacerbated if it were applied to dual index mortgages. Since these are important mortgage products at the present time in Poland, the structure of the IBD would have to be compatible with all mortgage types to maintain a level playing field among the banks.

<sup>14</sup> The countries with at least a limited MID include the U.K., Sweden, Belgium, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Greece, and Finland.

<sup>15</sup> The U.K., which already has one of the most sophisticated systems of housing finance in the world, has just recently proposed eliminating the MID.



better target households that most need assistance. Limits could be structured via the tax bracket (preferably) or on the amount of the loan. Since relatively few households now utilize mortgage loans, a MID will not be costly at present, although demand for loans can be expected to rise given the subsidy and as real income grows in Poland. Finally, a MID may be administratively more efficient than direct grants or a buy-down.

**! A Choice or a Package of Subsidy Policies?** Given that both types of liquidity constraints—down payment and payment to income ratio—may affect households, there is some argument for offering households a choice of subsidy or a package addressing both types of constraints. Thus, a households might be given a choice between a grant (down payment assistance) or a MID or a buy-down (to reduce costs over time).<sup>16</sup> It is also possible to offer both forms of assistance, that is, a direct grant for down payment assistance and a choice of an IBD or a MID to assist with payments over time. However, this approach would certainly become administratively more complicated.

It would be extremely useful prior to making a final decision on an approach to subsidy design to undertake an analysis of what type of problem is most pressing for the target households. As noted, although Australia's program offered either an up-front grant or payments over time, the vast majority (80 percent) chose the up-front payment. Finally, whatever choice is made by Poland, eligibility for the subsidy should be limited to the GOP's targeted income groups and structured such that the anticipated take-up is consistent with budgetary possibilities.

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<sup>16</sup> One should note that MID policies differ in the manner in which they are administered, which impacts the assistance in monthly payments. In the U.K., the MIRAS (mortgage interest relief at source) deducts the tax at the time of payment. In the U.S., in contrast, the tax relief is received at the end of the tax year.

## 1.5 Other Recommendations

**# Rental Housing and Rent Reform.** There is important new evidence concerning the importance of rental housing in maintaining employment: a recent study of the industrialized economies links lower unemployment rates with a higher share of rental housing in the total stock.<sup>17</sup> Enhanced labor mobility is extremely important to Poland's development at this point, and thus additional rental housing is important in this context.

Further development of a privately supported rental sector, however, is seriously constrained by the failure to undertake rent reform. Movement toward market-based rents together with improved housing allowance support is a crucial first step. Rental housing supply is currently supported via the TBS system of interest rate subsidies for housing targeted at moderate-income households; modifications to this program and perhaps a shallower subsidy aimed at slightly higher income groups might also be considered. In any event, *it must be understood that movement to market rents is a crucial cornerstone to efforts to pull private capital into the rental sector—whether for private development or contribution of private capital to TBS programs; thus, the subsidy system must give strong support to rent reform and housing allowances.*

**# Subsidy Policy and Supply Constraints.** Properly structured, tax (or other) subsidies to owner-occupied housing will increase housing consumption. This need not be the case, however, if supply constraints result in subsidies being capitalized into urban land prices.<sup>18</sup> Although these findings are based on cities in developed countries, it is possible that in Warsaw and in other high demand urban areas, which may now have a relatively inelastic supply of land and infrastructure, housing subsidies would simply be capitalized into higher housing prices. Thus, as HUDA has stressed, supply-side constraints should be addressed along with subsidy plans for housing.

## 1.6 Summary of Recommendations

Although this paper focuses on subsidies for owner-occupied housing, these must be considered within the overall framework of Poland's housing issues, including subsidies to rental housing, the development of the housing finance sector, supply constraints, and

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<sup>17</sup> See the study by A.J. Oswald, "A Conjecture on an Explanation for High Unemployment in the Industrialized Nations: Part I".

<sup>18</sup> See Capozza, Green, and Hendershott.



as yet unfinished policy reforms. Our recommendations, which are summarized in chart 1.1, are as follows:

- ! **Provide Realistic Estimates of Housing Demand.** The first step is to develop *realistic estimates of housing need* in Poland. If large new subsidies are designed in the current context of unrealistic estimates of housing shortage, the policies will be distorted and put unwarranted pressure on the budget. Estimates of housing demand, delineated by type of household and type of housing, will assist in structuring the balance between demand- and supply-side subsidies.
- ! **Continue the Focus on Macroeconomic and Housing Reforms.** It is obvious that macroeconomic policies which will lead to a continued decline in inflation are crucial to housing. Importantly, however, this should be combined with continued attention to reforms, including legal, administrative, and information system reforms, which will reduce real lending rates in mortgage finance. Impediments to the “enabling” structure for housing finance include, for example, the statutory lien, a lengthy and difficult foreclosure process, and delays in title and registration procedures. *Lower lending rates would provide more benefit to would-be owners than can possibly be financed from the budget.*
- ! **Eliminate the Current Tax Benefits to Owner-Occupied Housing.** The current system of large tax benefits to new construction of owner-occupied housing should be eliminated whether or not tax reform is implemented at this time. The benefits are overly large, regressive, and redundant with what households would do on their own. This approach may simply result in a fewer number of larger and fancier houses rather than a greater increase in more modest units.
- ! **Alternative Subsidies to Owner-Occupied Housing.** If Polish policy makers wish to assist owner housing, the current system should be replaced with subsidies that are more efficient, better targeted at households in need, and more progressive. We recommend replacing the current tax credit with a combination of direct grants and either the interest buy-down or the mortgage interest deduction. The choice between the latter largely turns on administrative efficiency (the MID is simpler) and greater budgetary control and compatibility with a simpler, proportional tax regime (which suggests the IBD).
- **Direct Grants.** A *direct grant policy* is a preferred alternative subsidy as compared with the present tax benefit to owner-occupied housing. The

direct grant system can be directed at household groups selected by Poland's policy makers. It would be targeted to avoid subsidizing those who would build (or buy) in any case. It could take the form of either a lump sum grant or payments over time. Since difficulty with a sufficient down payment is an important problem in Poland, the grant system provides a flexible response. However, the grant must be structured such that the anticipated utilization is consistent with budgetary possibilities.

- **Interest Rate Buy-down.** An IBD assists with the payment to income ratio. It would encourage use of the housing finance system and could be administered through the banks. The subsidy is consistent with a simplified tax regime and can be structured according to borrower characteristics in order to achieve the desired targeting. However, it is likely to be more complex to administer than either a grant or a MID.
  - **Limited Mortgage Interest Deduction.** Another alternative is a *limited form of mortgage interest deduction*. A well targeted MID, which limits eligibility via the tax rate or amount of loan, would also encourage the use in Poland of the housing finance system and provide an effective way to leverage a household's own savings. It helps establish equity between those who must finance their house with mortgage debt rather than with their own wealth.
- ! **A Subsidy Choice or a Subsidy Package?** As discussed, whereas grants are generally utilized to assist with down payment deficiencies, while the MID (or an interest rate Buy-down) reduces the cost of a loan over time, these policies could be useful as either alternatives or as a package. However, while this may make good sense from a policy perspective, administrative problems would certainly arise. For example, one would need to determine a desired total transfer per household type (in order to address the budget possibilities), and equivalent amounts for either the package or the individual subsidy choices (in order to address horizontal equity).
- ! **Contract Savings Systems.** An additional issue with regard to homeowner subsidies is the configuration of Poland's *contract savings systems*. The contract savings system, particularly the *kasa budowlane*, creates a new class of intermediary; these are not needed for delivery of housing subsidies, and thus are administratively very inefficient. At a minimum, Poland's dual systems should be merged, and could rely on the

infrastructure for the *kasa mieszkaniowe*. In addition, the subsidy rate and the cap (the maximum amount of the transfer) in the both the *kasa budowlane* (Bausparkassen) and the *kasa mieszkaniowe* should both be lowered.

- ! **Rental Housing and Rent Reform.** The subsidy system should continue to address *rental as well as owner-occupied housing*. Enhanced labor mobility is extremely important to Poland's development at this point, and rental housing is crucial to such mobility. As noted, rental housing is currently supported via a housing allowance program and the TBS system of interest rate subsidies for housing targeted at moderate-income households. The design of the TBS system should be examined for its long-run viability; also, "shallower" and simpler assistance to rental housing should be assessed. *Finally, rent control, which actually works to decrease the housing stock must be ended as quickly as possible or the entire system of incentives will remain far less effective than it could be. An improved housing allowance, possibly accompanied by revisions to the cost-sharing formulas for the gminas and the central government, will be necessary to support rent reform.*
- ! **Rehabilitation.** Historical *neglect of maintenance and capital repair* is a serious state "legacy" and its remedy is deserving of state support. Such assistance will also have an important impact on housing supply: new construction should not be over-emphasized to the detriment of the capital backlog in the standing stock. Many Western European countries are now emphasizing rehabilitation. France provides grants only for rehabilitation; similarly, Germany has interest rate subsidies only for rehabilitation.
- ! **Supply Constraints.** Particularly in Warsaw, but also in other of the high demand urban areas, it is possible that housing subsidies would simply be capitalized into higher housing prices. Thus, as has been stressed by HUDA, *supply-side policies* for land, infrastructure, urban planning and other recognized supply-side constraints should be addressed along with plans for housing.

Policy	Recommendation
Estimates of Demand	Provide realistic estimates of housing afford ability and demand. The estimates, delineated by type of housing and type of household, will assist in establishing an appropriate level of expenditures and in structuring the balance between demand- and supply-side subsidies to rental versus owner-occupied housing.
Macroeconomic and "Enabling" Framework	Excessive risk in housing finance increases real lending rates unduly. Continued attention to reforms in legal and administrative infrastructure (foreclosure, statutory lien, level playing field, information technology, databases for housing finance, databases for valuation, and so forth), together with continued macroeconomic progress, could provide far more assistance than possible from the budget.
Large Tax Benefits to Owner-occupied Housing	These subsidy policies should be eliminated whether or not tax reform is implemented. They are inefficient, excessive, and redundant, and may fuel consumer expenditures on other goods.
Alternative Subsidies for Owner-occupied Housing:	Preferred alternatives are a direct grant system and either a buy-down or a mortgage interest deduction. A direct grant policy can be efficient and targeted and assist with down payment.
— Direct Grants	Both a limited mortgage interest deduction and an interest buy-down assist with the payment to income ratio. Both would encourage the use of the housing finance system in Poland, which would provide an effective way to leverage household savings. Since these subsidies address different concerns, a household could be offered a choice or a package.
— Interest Buy-down,	
— Mortgage Interest Deduction	
— A Choice or a Package?	
Contract Savings Systems	Contract savings is an inefficient and expensive way to deliver direct grants. If continued, Poland's dual contract savings systems should be merged and utilize existing infrastructure. In addition, the subsidy rate and the maximum amount of subsidy in both programs should both be substantially decreased.
Rental Housing and Rent Reform	Rent reform is the single most important outstanding housing reform. Market rental rates are necessary not only to provide gminas and private owners with funds for capital repairs but, more importantly, to provide the necessary incentives for participation of private capital, especially in developing a rental market.



Policy	Recommendation
Reform of the Housing Allowance	<p>The housing allowance should become Poland's flagship subsidy program. It is crucial to rent reform, afford ability in a private rental market, and labor mobility:</p> <ul style="list-style-type: none"><li>! The eligibility ceiling must be increased based on market realities.</li><li>! The effort ratio should be increased for all but very poor households.</li><li>! The formula should eventually be changed to reflect "fair market rent" and thus provide equity across geographic cost differences (and cap payments).</li></ul>
Rehabilitation And Renovation	<p>Neglect of repairs to major capital systems is a serious state legacy deserving of state support. Current rehabilitation tax policies do not address major problems and are also redundant. Despite much debate, only thermal renovation policies are now in place.</p>
Supply Constraints	<p>Constraints to supply of land and infrastructure for housing can undermine the impact of subsidies, if the subsidy is simply capitalized into land prices. This might occur in Warsaw and other areas of high demand for housing.</p>

## 2.0. ALTERNATIVE SUBSIDY POLICIES FOR OWNER-OCCUPIED HOUSING

### 2.1 *Introduction: A Framework for Analysis and Criteria for Evaluation of Subsidy Policies*

# **Current Subsidies to Owner-Occupied Housing.** Poland's primary subsidy to owner-occupied housing is a generous tax benefit to new construction. Other subsidies include a lesser VAT rate on building materials, various tax-related benefits for rehabilitation, and tax concessions for cooperative housing.<sup>19</sup> In addition, Poland's contract savings system (*kasa mieszkaniowe*), which subsidizes households via the tax system, may soon be joined by a *kasa budowlane* (Bausparkassen) system of subsidies, the design of which is still under discussion. It is not yet fully clear the extent to which the Bausparkassen system will be aimed at purchase of new or existing housing versus rehabilitation, nor how large the subsidy will be.<sup>20</sup>

<sup>19</sup> See "Public Sector Housing Finance Strategies" for a description and critique of these subsidies. In addition, as discussed below, failure to tax the imputed rents from owner-occupied housing (which is the case in nearly every country) is an additional form of subsidy.

<sup>20</sup> See the discussion in Michael Lea, "Analysis of Contract Savings Systems for Housing in Poland." The parameters of the Bausparkassen system are not yet finalized. Furthermore, there is a discussion of the

The discussion below presents a critique of Poland's main subsidy policy for owner-occupied housing—the tax benefit policy—and then discusses the advantages and disadvantages of three alternative policies: a system of direct grants to would-be homeowners (to assist with down payment constraints) and either a capped mortgage interest rate deduction or an interest buy-down (to assist with monthly payments). Before beginning the discussion, however, it is useful to briefly review the framework for analysis developed by the UIC team for review of housing reform and subsidy policies. This framework was developed for review of HUDA's Mid-term Strategy proposals and is described in the team's report "Public Sector Housing Finance Policy Strategies for Poland".

Box 1.1 summarizes the analytical framework, which has three main elements, discussed below:

- ! An analysis methodology in which “effective demand” and “afford ability” guide development of housing subsidy policies over the long term.** As discussed above, housing “need” in Poland has been defined in terms of the (very large) gap between the housing stock and the number of households. In contrast, Poland's housing goals need to be addressed in terms of what is affordable and feasible in the context of concrete subsidy policies. To understand issues of afford ability from a program design standpoint, the following questions should be addressed:
- Whether estimates of long-term “housing need” be translated into specific and feasible long-term policy goals?
  - What would be the extent of the afford ability problem for households in Poland if there were no assistance from the state? This type of estimate serves as a “baseline” from which to quantify housing goals from an afford ability perspective.
  - Given the programs that Poland is developing to help solve the problems of afford ability and supply, to what extent do different income groups, and correspondingly, different elements of the housing stock need to be assisted, consistent with some “reasonable” goal of funding from central and gmina budgets?



**Box 1.1**  
**A Framework for Analysis of Housing Policies**

- An analytical approach to establishing long-term housing goals guided by effective demand and Afford ability. In this context, the gap between “housing need” and “housing availability” would be more directly linked to specific subsidy programs and economic assumptions over the long term.
- A focus on policies that most strongly encourage the development of market-based rental and homeowner sectors, responsive to “market” signals for demand and supply for new construction, rehabilitation, and housing finance.
- The design of subsidy policies that are as efficient and effective as possible in supporting the development of a private housing market - that is, which provide incentives for, and are complementary to (do not compete with), private sector investment. Subsidies should also redistribute income in the manner that Polish policy makers have chosen, and be well targeted, transparent, and perceived to be fair.

**! The development of market-based rental and homeowner sectors, responsive to “market” signals for demand and supply for new construction, rehabilitation, and housing finance. Major elements include:**

- The pressing need for market rents, combined with a more supportive housing allowance program designed with the rent goals as an actual program parameter.
- An improved legal, administrative, and regulatory framework.
- Public initiatives to increase mobilization of private resources for housing and to increase the roles of the banking and investment sectors in housing provision.

- ! **Subsidy policies that are as efficient and effective as possible in supporting the development of a private market and redistributing income in the manner that Polish policy makers have chosen.** General principles of subsidy policy include:
  - **Economic efficiency and minimization of redundancy:** policies that achieve the desired impact with as little public expenditure as possible and, especially, policies that are not redundant, that is, *that do not undertake what the private sector will do on its own*.
- ! **Targeting:** policies that implement the “redistribution” of income cost-effectively—that is, policies that are well targeted and do not subsidize those who can pay.
- ! **Transparency:** subsidy policies that are clearly understood and administered in a clear and equitable manner according to codified rules.
- ! **Fairness and Equity:** policies that are transparent and deemed fair by most stakeholders. Generally, if the subsidy policy is regressive rather than progressive, it should be justifiable on other grounds - that is, it should support an important and clear policy goal. An example of this is using regressive tax benefits in the interest of an efficient approach to stimulating supply. Alternatively, providing rent-controlled housing to higher-income households is both inefficient and discourages market development.
- ! **Maximum Use of Private Sector Resources:** policies that elicit the maximum contribution of resources from households and the private sector in general and that clearly place the role of capital allocation for housing primarily with the private sector.
- ! **Policies that encourage and maintain private market development:** policies that work best in conjunction with the private sector and do not “compete” with market mechanisms (such as market interest rates and development of the mortgage bond and municipal bond markets) and thereby do not undermine the development housing finance for households, gminas, and developers.
- ! **Administrative efficiency:** policies designed to minimize administrative time, cost, and complexity, as well as to minimize fraud.

## 2.2 Evaluation of Poland's Current Subsidies for Owner-occupied Housing



# **Tax Benefit to New Construction.** The goal of a large subsidy to new construction is clearly to increase housing supply in a rapid fashion. Its presumed advantage is efficiency: higher income households require little (or no) additional incentive or assistance on the margin, to construct a new dwelling.

On analysis, however, the disadvantages of this tax benefit approach probably outweigh the advantages. The current tax subsidy is very large. About 25 percent of tax-paying households utilized the subsidy in 1996, and the cost to the Treasury in terms of taxes foregone was PLN 2.6 billion, which was about 2.7 percent of the budget. In 1997, the subsidy policy was shifted from a deduction from income to a deduction from taxes, but still may have cost (in lost taxes) about 2.1 percent of the budget. The subsidy is not well targeted: it is regressive and in some cases redundant. That is, to the extent that some of the highest income households may have needed no additional assistance to construct a new home (and/or may use the benefit to construct a larger, higher quality home than they would otherwise or to purchase a car or other consumer durables) this approach becomes inefficient. Thus, the actual number of new dwellings may be less than expected.

Secondly, as noted above, the issue of the impact on house prices must be considered. To the extent that much of the impact is taking place in urban areas where demand is high and the supply of land, especially serviced land, is limited, the subsidy may simply be capitalized into higher prices. Thus, the danger of asset-price bubbles contributing to real estate and banking crises, a topic discussed in Section 3.0, must be kept in mind.

**VAT.** As noted, additional tax-related subsidies to housing include a lower VAT rate on building materials and several smaller tax subsidies for rehabilitation. The VAT tax may cost another 0.5 percent of the budget. Again, it is felt to be inefficient because it may result in larger houses (rather than more houses of a modest size). Since it is not targeted at only households who need assistance, it is “redundant” (like the tax benefit above).

**Rehabilitation Tax Credits.** The rehabilitation credits, although intended to address what we consider to be a very serious problem, are not appropriately structured to address the most pressing issue—the backlog of major capital repairs. Poland has been discussing alternative rehabilitation policies for some time; this is an important policy issue remaining to be resolved.

**Contract Savings.** Poland has two contract savings programs. One system, *kasa mieszkaniowe* is in operation while the second, the *Bausparkassen*, has been approved by the Parliament but is not yet in operation. The *kasa mieszkaniowe*

provides a tax credit to individuals saving for housing purposes while the *Bausparkassen* program will provide direct grants to individuals to be used for housing purposes based on completion of a savings contract.

Both programs help ease the down payment constraint facing purchasers of housing, either new or existing. In addition, they provide an incentive for the accumulation of savings for a down payment. However, the *kasa mieszkaniowe* program suffers from many of the same problems as the new construction and rehabilitation tax credits. It is expensive and vertically inequitable as it can be used only by those who pay taxes, with a benefit based on the value of the house. The subsidy rate generates an above market rate of return on the savings, and the cap is exceedingly generous. From the viewpoint of the government, the program is administratively efficient as the savings and loans are made by banks. The overall resource costs of the program are modest due to the non-profit restriction.

The *Bausparkassen* program is potentially more expensive than *kasa mieszkaniowe* as it is an entitlement for all individuals who complete a savings contract. It is more equitable than *kasa mieszkaniowe* as the bonus is not based on payment of taxes or the tax bracket of the saver. The program has the advantage of being administered by private institutions but it is more costly to the economy than *kasa mieszkaniowe* as it sets up a new class of financial intermediaries requiring capital and higher operating expense. It is the opinion of the UIC team that these new institutions are not needed.

Supporting two different systems is wasteful from a budgetary standpoint and their potential competition increases the systemic liquidity risk to the government (i.e., large numbers of people may swing from one to the other, according to shifts in attractiveness). At a minimum, they could be merged and utilize the existing infrastructure of the *kasa mieszkaniowe*; alternatively, both could be replaced by the subsidy alternatives discussed below.

### **2.3 Alternative Subsidies for Home Purchase and Construction**

Poland is now considering restructuring its overall tax system towards a flatter (lower rates) and simpler (fewer deductions) system. Under this type of regime, some or all of the current tax benefits to housing would be eliminated. Assume for the moment that Poland has, in fact, both eliminated its tax-related housing benefits and restructured taxes towards a lower rate, flatter system. What might be the impact on housing?

**The Effects of a Flat Tax System on Housing.** Properly structured housing subsidies, whether in the form of tax subsidies, direct grants, MIDs, or IBDs, will



increase housing demand. Other things being equal, in a flat tax rate environment, with elimination of Poland's major tax subsidies to owner-occupied housing, it would be expected that (1) the demand for housing would fall (those building houses may build smaller ones) and/or (2) the number of households demanding owner-occupied housing would fall. Finally, it may also be the case that house prices would fall; this depends in part on whether the tax subsidies had been capitalized into land prices.

**Alternative Subsidy Policies Worldwide.** We begin the discussion by noting how extensively owner-occupied housing is tax-favored in most countries. First, imputed rents to homeowners are not taxed in the vast majority of countries.<sup>21</sup> Second, most industrialized countries allow mortgage interest to be deducted from taxes; in many cases, however, limits are placed on the amount. Third, most countries tax capital gains on the house very lightly (if at all) and at a lower rate than that on most other income. In addition, some countries subsidize first-time homeowners via grants and others subsidize the interest rate on new construction, particularly for rental housing.

Although the UIC team does not conclude that there is a strong economic justification for introducing new subsidies for owner-occupied housing (especially not those aimed largely at high income households), from a *political* perspective, finding effective alternatives is probably a prerequisite to eliminating the current, large benefit. From a social perspective, more efficient subsidy policies would help target those households identified by policy makers and provide increased leverage for participation of private capital. As noted in Section 1.0, the suggested alternatives to the present tax benefits are (1) a direct grants systems, and either (2) a capped mortgage interest rate deduction, or (3) an interest rate buy-down. It might also be plausible to offer a choice (or even a package) of benefits.

### 2.3.1 Non-Taxation of Imputed Rents

Home ownership is tax-favored in most countries in the world because imputed rent—the rent homeowners avoid paying to landlords—is not taxed.<sup>22</sup> Because the rents received as “landlords” are not taxed when one rents to oneself, as they are when households rent to each other, ownership is tax-preferred. This, then, is the fundamental source of tax benefit to most homeowners, as compared with those who rent.

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<sup>21</sup> See Hendershott, “Taxing and Subsidizing Housing.”

<sup>22</sup> See Hendershott, “Government Policy and the Allocation of Capital Between Residential and Industrial Uses,” and Laidler, “Income Tax Incentives for Owner-Occupied Housing.”

The only way to significantly limit the tax subsidy to owner-occupied housing is to tax the return to housing. This is done in Germany, Sweden, Denmark, and Finland, all of which tax imputed rent in some fashion. Several articles have shown that this would be a progressive tax in both the U.S. and Australia.<sup>23</sup> (While we are not necessarily advocating this policy at present in Poland, it is instructive to keep the issue in mind when considering other subsidy proposals.)

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<sup>23</sup> See Follain, Ling and McGill, and Bourassa and Hendershott.



### **2.3.2 Direct Grants to Stimulate Owner-Occupied Housing**

An alternative subsidy to owner-occupied housing which could be considered by Poland is a direct grant to would-be owners. Often such programs are targeted at young households and first-time homeowners. Australia introduced a direct grant system in the 1980s and it proved to be effective: the first time home ownership program (FHOS) caused the home ownership rate for 21 to 25 year-olds to rise from 28.5 to 37.1 percent; put another way, it accelerated the time to first ownership by two years.<sup>24</sup> Ireland now has a direct grant system as a subsidy for down payment (about 5 percent of the down payment). Germany offers each new household a one-time grant to buy a house, equal to DM 5000 per year over eight years, which can be counted on by banks as a source of repayment of loans. Hungary has a long tradition of lump sum grants for new construction; the current policy (Housing Construction Allowances) has been in effect since 1994, and in 1998 was expected to be about 1 percent of the budget. Hungary is also considering a fund to match local government funds, which local officials could give out according to local criteria. Finally, the Czech Republic has set aside a limited amount of funds, allocated on a first come, first served basis (although it is called a zero percent loan with no repayments in the first ten years, it is essentially a grant).

In summary, the direct grant approach, if effectively structured to achieve Poland's housing goals, can offer a targeted, efficient approach. Many issues must be addressed in designing this approach, however, so that the desired types of households and housing are targeted and so that the required funds are in conformance with budget constraints. These issues are further discussed below.

#### **The Advantages of Direct Grants**

- ! **Efficiency and Targeting.** As compared with Poland's current tax subsidy, a direct grant program can be more directly aimed at specified target groups, thus assisting only those in need and avoiding "redundancy" by subsidizing households that would not be able to purchase or build homes on their own. Few countries have a subsidy focused solely on additional construction as being the source of the social benefit. A more common type of social benefit is helping new households acquire a home. The argument is relevant in Central Europe in particular, because most older households have acquired their home with some sort of government subsidy, usually a very large one (e.g., low rents, low-rate loans, or purchase of cooperative or communal units at heavy discounts). So it

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<sup>24</sup> See Bourassa, D.R. Haurin, J. Haurin, and Hendershott

may be viewed as fair to give each new household (and perhaps others who missed out on the housing give-aways) some one-time assistance.

- ! **Targeting on Income.** Another type of targeting issue is how to restrict eligibility to households meeting some income and/or asset ceiling. The Australian program, for example, limited eligibility via a multiple of average earnings. Although accurate income information is difficult to obtain in Poland, income targeting would both avoid redundancy and introduce an element of progressivity.
- ! **New Construction Only? Or For Existing Homes?** Poland should consider whether it wishes the grant program to simply encourage new construction or whether it would also apply to completion of units under construction and purchase of an existing home. It should be noted that most countries outside Central Europe are moving away from subsidies solely for new construction, except perhaps for lower income rental housing. This represents a general shift in focus toward Afford ability rather than housing supply. Also, the issue again calls into question whether Poland actually has a serious housing shortage. Although this is the general perception inside Poland, there is evidence that this is not the case—that is, that Poland is as adequately housed as would be expected on the basis of its current level of income.<sup>25</sup> In any event, if Afford ability is an important aspect of social policy, purchase of existing homes by eligible households could also become a program element.
- ! **Helping the Liquidity Constraint.** Home ownership, as has been noted, is responsive to income (permanent income), the costs of owning versus renting, and household preferences (a function of its life cycle and other factors). However, so-called “liquidity” constraints are particular problems of young households.<sup>26</sup> These constraints, although definitions vary, include a borrowing constraint (lack of sufficient down payment) and an income constraint (not having enough income to service the loan). The Australian FHOS program offered borrowers the subsidy as either an up-front lump sum or a cash flow over five years, or a combination of both. In other words, the subsidy was designed to address either the down payment constraint (the lump sum approach), the cash flow constraint (payment over time), or both (a combination of the lump sum and payment

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<sup>25</sup> As noted above, see Stephen Mayo, “Housing and the Economy.”

<sup>26</sup> See Haurin, Hendershott, and Wachter, and Follain and Wong for discussions of down payment and income constraints and how they interact to affect housing demand.

over time). Again, it is worth noting that 80 percent opted for the down payment.

In Poland and other transition countries, such “liquidity-constrained” households could be said to be the product of years of the socialist system. Since a major portion of remuneration was “in-kind” (subsidized housing, other subsidized goods and services, in conjunction with low monetary wages), these policies may have prevented households from accumulating a down payment at a rate that equivalent households in market economies would have done. A direct grant system can help ameliorate this problem for targeted households.

- ! **Tying Direct Grants to Household Savings and Mortgage Loans?** Another issue to be considered is whether (and how) the grant should be contingent on a certain level of funds being made available by the household and/or a mortgage loan to purchase the new (or existing) home. An important point in the design of the grant system is that the target households should have sufficient funds to succeed in building or purchasing a home. The subsidy is designed to expand new housing supply and/or home ownership; since the grant will cover only a limited portion of the cost of the house, household savings, and most probably a loan, will also be necessary.
- ! **The Disadvantages of Direct Grants.** The most likely problem is that the grant would be relatively expensive. Australia’s program was discontinued in 1996, for example, largely because it proved very expensive.

Issues to be addressed in this regard include universal entitlement versus first-come, first-served (on an annual or some other basis), and, as discussed above, a variety of complex equity and efficiency issues in deciding how best to target such grants. The eligibility criteria would target households which have sufficient income and assets to succeed in purchase or new construction on the basis of the grant, their own funds, and a mortgage loan. In other words, the program should not target those too poor to purchase a home (these households should be assisted via a rental program) nor those wealthy enough to be able to purchase without assistance. It may also be possible to target on house size (in sq. m.), in addition to, or instead of income. Also, parameterization of these criteria may differ by voivodship and urban/rural areas. Again, the question is whether the program will target just new construction (less appropriate?) or purchase of existing homes as well (more applicable to Poland, more equitable, but more expensive).

### 2.3.3 Mortgage Interest Deduction

The mortgage interest deduction (MID) is one of the most common types of subsidy to owner-occupied housing. Both targeted and relatively untargeted examples are common. Thus, all households can be eligible, as in the U.S. (as well as in Spain, Italy, Denmark, Sweden, and Finland) or eligibility can be targeted as in many of the other MID programs (Japan, Germany, France, and the U.K.).<sup>27</sup>

As would be expected, the MID strongly impacts the demand for mortgage credit. Australia, for example, which has no MID program, has an average loan-to-value (LTV) ratio of 0.14 as compared with an average of 0.44 in the U.S. (note that the LTVs are generally much higher at the moment the loan is taken out). Also, the MID extends the fundamental tax advantage of owner-occupied housing (failure to tax imputed rents), to households who cannot finance their home purchase entirely with equity; these are presumably the less wealthy households.

In the U.S., the MID has been attacked for many years as being too expensive, too regressive, and resulting in over-investment in residential real estate as compared with other types of investment. Recent analyses, however, place the MID in a much more balanced perspective.<sup>28</sup> First, the revenue gain from elimination has been shown to be far less than initial estimates. More importantly, the equity characteristics of the MID are more complex than generally thought. As discussed above, the fundamental subsidy to owner-occupied housing, relative to rental housing, is the failure to tax the imputed rents flowing to the owner. It can be argued that the MID extends this subsidy to those who finance their homes with mortgage loans as opposed to equity; moreover, the subsidy is of most value to the less wealthy who cannot finance home purchase solely with equity, but must borrow. Nevertheless, the tax advantage in the U.S. system does increase as the marginal tax bracket increases; furthermore, the benefit is so entrenched among such a large a number of persons that proposals to reduce or eliminate the advantage have never been adopted.

**An MID in Poland?** For Poland, the mortgage interest deduction, although somewhat in contradiction to the goal of a simplified tax system, could actually offer several benefits that should be seriously considered.

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<sup>27</sup> For discussions of European subsidies, see Turner, Jakobsson, and Whitehead, and David Miles.

<sup>28</sup> See, for example, Follain and Melamed, "The False Messiah of Tax Policy: What Elimination of the Home Mortgage Interest Deduction Promises and a Careful Look at What It Delivers", and Woodward and Wachter, "Goring the Wrong Ox: A Defense of the Mortgage Interest Deduction".



First, a MID subsidy would encourage utilization and development of the housing finance system. This could be expected to decidedly speed up the rate of construction. Although more and more banks have begun to offer mortgage loans, relatively little housing is now financed through mortgage loans in Poland (this is also true in Hungary and the Czech Republic).<sup>29</sup> It would be of great benefit for households to be able to leverage their own funds with a mortgage loan. For this reason, the UIC team has encouraged reforms which will help bring a fall in real lending rates, such as: (1) a continued fall in inflation; (2) continued improvements to the legal structure supporting housing finance—that is, addressing foreclosure, statutory lien, titling, and so forth; and (3) further improvement in bank operating systems and information technology.

Second, in order to limit the regressive effects of this approach, the deduction may be limited to a specific amount and/or taken by less wealthy households at a lower tax rate. The United Kingdom, Japan, and France, for example, all limit the amount of the deduction (and Germany has a very limited deduction). The magnitude of the tax advantage from the mortgage interest rate deduction is directly related to the household's marginal tax bracket. If Poland adopts a lower, flatter tax schedule, a fundamental source of regressivity will have been reduced.

Third, the previous section discussed “liquidity-constrained” households – which are likely to be abundant in Poland and other transition countries – from the perspective of direct grants. The arguments are also relevant to supporting the MID. By reducing the after-tax cost of the mortgage loan, households who face constraints with regard to the payment-to-income ratio are assisted via an MID.

In summary, in Poland, if the MID is limited by the tax bracket, an income cap and/or the size of the loan, it may be an effective way of promoting Home ownership among less wealthy households who cannot afford to purchase their house solely with their own funds. And in the long run, development of the housing finance system will be very beneficial. Instruments developed for long-term funding can serve as good alternatives to Government paper on the capital market.

#### **2.3.4 Interest Rate Buy-down**

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<sup>29</sup> See Douglas Diamond, “The Transition in Housing Finance in Central Europe” and Sally Merrill, et al., “The Feasibility of Estimating the Demand for Residential Mortgage Credit in Poland.” It is, in fact, rather difficult to know what level of mortgage finance would be expected at this stage in the transition period. Loan data suggest that consumers are first satisfying their demand for cars and consumer durables; housing finance, with relatively longer loans, might be expected to pick up rapidly if real rates continue to fall.

An interest rate buy-down (IBD) is a subsidy mechanism designed to help borrowers meet the cash flow requirements of a market rate mortgage. An interest rate buy-down provides a limited amount of assistance that phases out over time. The phase-out takes into account the fact that the nominal income and thus repayment capacity of most borrowers rises over time (the mortgage tilt problem that was noted earlier). A buy-down is preferable to a flat, life-of-loan interest rate subsidy because it is both limited in time and generally phased out reasonably rapidly. It is thus quite a bit cheaper and can serve more households. It can be calibrated to be of different depths and terms depending on the target audience. Like the MID, the buy-down also encourages use of the housing finance system. The buy-down approach allows the use of market-rate mortgages, which will be more attractive and less risky to banks. In addition, the banks can be used to administer the program avoiding the creation of a large bureaucracy for the program.

The problems pertaining to a buy-down subsidy are many ways similar to those for grants and a MID: that is, who to target and how to balance costs, eligibility, and equity. Thus, should the buy-down be targeted only to new construction or to existing homes as well? Is it for young first-time homeowners or a broader group?

Although a buy-down can be calibrated to be of different depths and terms depending on the target audience, it is also potentially very expensive. Both the buy-down and the MID impact the budget on a more spread out basis than up-front grants. In order to compare the cost of a grant to a buy-down, consider that the grant is the present value (PV) of the interest rate buy-down: it may be more expensive per household (other things being equal) but it is paid for over time. Finally, however, a buy-down is more administratively complex than a direct grant since it is administered over multiple years; it is also likely to be more difficult to administer than the MID (depending on its features).

Interest rate buy-down subsidies are in use in Sweden, Finland, and Hungary. Sweden has an interest rate subsidy covering 31.4 percent of the interest (calculated administratively usually representing 80 percent of that actually paid) on loans up to 100 percent LTV. Each year after the first the subsidy falls by 5.7 percentage points. Finland had an interest rate subsidy awarded for 8 to 10 years, subsidizing 35-45 percent of the interest for the first five years and 25-35 percent for the remainder. Hungary's buy-down policy is known as the "4-3-1"; it subsidizes the loan with four percentage points off the interest rate for the first five years, then at three percentage points for the next five years, and one percentage point for years 11 through 15.



These examples suggest a wide range of possibilities in the depth of the buy-down, the duration, and the use of a percentage discount to the interest rate as compared with a percentage point reduction. As noted, the buy-down recognizes that nominal income and thus the repayment capacity of a household rises over time. The subsidy might work as follows in Poland:

- ! The government would develop eligibility guidelines for borrowers. The subsidy could vary according to borrower characteristics (e.g., a lower income borrower or one with a larger family may be given a deeper subsidy or a longer phase-out period)
- ! The banks would screen borrowers based on application data and determine whether a borrower qualified for the subsidy
- ! The bank would grant a market rate mortgage loan to the borrower
- ! The government would either make a monthly payment to the bank for the difference between the market and borrower payment rate or deposit the annual total difference in interest due in the bank the bank at the beginning of the year. The bank would then debit the account on a monthly basis to make up the shortfall

For example, if the market rate of interest is 15 percent on a 20-year loan for PLN 100,000, a five percentage point buy-down that phases out over five years could work as follows:

Year	Effective Rate (Percent)	Household Payment	Subsidy
1	10	11,580	4224
2	11	12,384	3420
3	12	13,212	2592
4	13	14,052	1752
5	14	14,916	888
6	15 percent (market rate)	15,804	0

The program could also work with variable rate loans as well with the government providing a declining percentage of the interest payments.

### 3.0 HOUSING AND THE MACRO ECONOMY

Housing will become an increasingly important component of the macroeconomy as Poland continues its transition and growth. A market-oriented, well-functioning housing sector is essential to that growth. In contrast, the growth of GDP, and Poland's competitiveness, will be retarded by a housing sector characterized by price distortions (especially rent control), under-investment by the private sector, low household contribution rates, and lack of rental housing production, which decrease labor mobility.

This section comments on the following topics:

- The importance of housing to the macro economy
- The reverse association: the perils of having an ineffective housing sector
- Over-investment and under-investment in housing: getting estimates of need right
- The importance of housing to the stability of the economy



### **3.1 The Importance of Housing to the Macro economy**

Housing's role in the economy depends on its role as a store of wealth, a generator of income, and a good that is linked to other markets and parts of the economy.<sup>30</sup> The principal linkages to the broader economy are through the so-called "real" side of the economy, where activities related to housing investment and consumption give rise to demands for linked products such as building materials, residential infrastructure, public services, and home furnishings; through the financial sector, where housing serves both as a primary motivation for household savings and a generator of loans to finance its construction and purchase; and through fiscal circuits, where housing serves both as an asset that can be taxed (e.g., through property taxes) and a vehicle for provision of subsidies.

Aside from direct linkages through these circuits, housing has important, and no less powerful, indirect linkages to the economy. Many of the most important indirect linkages result from the spatial distribution of housing, both within and among cities. The spatial distribution of housing, especially relative to the demand for housing in different places, has major implications for the behavior and efficiency of labor markets. When, for example, not enough housing is available in cities with growing employment prospects, artificially high housing prices (and/or a deficit of rental housing) restrict labor mobility and depress productivity. Similarly, when households within a given city live in places other than their preferred locations because of housing shortages, commuting costs can be substantially higher and information about job opportunities less than adequate. These outcomes raise the cost of doing business, impose costs on households, reduce urban productivity, and result in lower rates of labor force participation and higher levels of unemployment.

**Housing and the Generation of Income.** Housing's value to the economy, reckoned in terms of annual flows, is made up of two principal components—housing investment and rents. Housing investment in most market economies typically ranges from 2-8 percent of GNP and varies non-linearly (in an inverted U-shape) with a country's level of economic development. At modest levels of economic development, housing investment is typically no more than 2-3 percent of GNP. Investment in housing relative to other investments rises rapidly with economic development, however, so that countries of Latin America, North Africa, and the Pacific Rim typically have ratios of housing investment to GNP from

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<sup>30</sup> Much of Section 3.1 is drawn from Mayo, "Housing and the Economy".

5-8 percent. Among industrialized countries, housing investment is lower—typically from 2.5-5 percent.<sup>31</sup>

As a share of gross fixed capital formation, housing's share also rises and then falls with economic development, typically representing no more than about 10 percent of gross capital formation at low levels of economic development, rising to between 30 and 40 percent at intermediate levels of development, and falling, modestly, to between 20 and 35 percent among industrialized countries. Thus, the ratio of housing investment to gross city product per capita follows the same pattern as that between housing investment and gross national product, with the ratio first rising then declining with levels of economic development.

Combining the economic contributions of housing investment and rents, the direct contribution of the housing sector to the economy ranges from less than 10 percent at low levels of economic development to between 20 and 25 percent at intermediate levels of development, and falls to between 15 and 20 percent among industrialized countries. At Poland's level of development, it should be expected that the "normal" contribution of the housing sector to GDP should be on the order of 20-25 percent.<sup>32</sup>

**Housing and Wealth.** Housing is the greatest single form of "reproducible wealth" in most modern economies. Reproducible wealth consists primarily of real estate, corporate equity (which accounts for most of the so-called "economically productive" capital stock invested in plant and equipment), corporate and government bonds, consumer durables (especially automobiles), precious metals that have been mined and processed, and other commodities such as fine arts. In the 1980s, a survey of the world's reproducible wealth in the eighteen industrialized countries responsible for most of the world's gross product indicated that "real estate", which consists of housing, farm real estate, and commercial real estate, was estimated to make up some 56 percent of the world's reproducible wealth (\$15.5 of \$27.7 trillion).<sup>33</sup>

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<sup>31</sup> See The World Bank, 1993.

<sup>32</sup> Reliable figures for housing investment and rents are not now available for Poland. See the discussion by Maciej Grabowski concerning macroeconomic data in Merrill et. al., "The Feasibility of Estimating the Demand for Residential Mortgage Credit in Poland".

<sup>33</sup> See Ibbotson, 1984. Ibbotson did not include the value of public infrastructure such as roads, ports, railways, and water and sanitation facilities in his calculation. Based on other estimates these are likely to be smaller in magnitude than either fixed income or equity capital but of the same order of magnitude of either.



**Housing Distortions, the Economy, and Labor Mobility.** In the United Kingdom, where there has been a legacy of heavy interventions by government in land and housing markets, researchers have found significant connections between practically every major economic aggregate and variables characterizing housing sector performance. What is of decisive importance, however, is that they have established that housing policy distortions affect first the housing market and then are propagated throughout the economy through a complex set of linkages. Studies in the U.K., for example, have indicated that housing market distortions have led to reduced rates of personal savings; higher interest, inflation, and exchange rates; and higher unemployment rates. Regarding the latter, it has been estimated that the structural unemployment rate in the U.K. is about two percentage points higher because of housing market distortions<sup>34</sup>

Similarly, economists who have studied the link between housing markets and labor markets in Poland have concluded that housing market distortions which have caused both low mobility rates and low vacancy rates have (1) raised wages in ways that are unrelated to productivity differences<sup>35</sup> and (2) increased the Polish unemployment rate, where some 25 percent of the 1992 unemployment rate was attributed to the spatial mismatch between workers and jobs and inability to move to take advantage of job opportunities.<sup>36</sup>

A recent study of the industrialized countries suggests that higher unemployment seems to accompany greater home ownership.<sup>37</sup> The argument is that homeowners are less mobile than private renters and are thus less willing to move to jobs when they become unemployed. Although this finding is based on analysis of the developed countries, and should not be assumed to apply directly to Poland, there is nevertheless a lesson here for Poland as well: Poland needs to pay attention to the supply and condition of rental housing and balance the funds spent on stimulating new owner-occupied housing with those dedicated to capital repair of the standing stock, undertaking rent reform, supporting renters through an adequate housing allowance program, and continuing to decrease rigidities in tenure regulations.

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<sup>34</sup> See World Bank, 1993, p.108 for a summary.

<sup>35</sup> See Mayo and Stein, 1988. In 1990, based on data from the Housing Indicators Program, the housing vacancy rate in Warsaw was estimated to be zero and residential mobility was estimated to be 2.6 percent per year. In market economy cities with relatively comparable incomes, the median vacancy rate was 6.9 percent, while the median residential mobility rate was 6.4 percent (and ranged as high as 24 percent).

<sup>36</sup> See Buckley and Gurenko, 1996.

<sup>37</sup> See A.J. Oswald, 1996.

**Housing and the Financial Sector.** Access to finance, and especially to long-term finance secured by a mortgage loan, has the capacity to dramatically change the pace of construction, allowing housing to get built more quickly in response to demand. As Bertrand Renaud observes, “Cities are built the way they are financed.” When they are financed from family resources that are modest and unpredictable, modest housing will get built at an unpredictable rate. When they are financed by formal construction and mortgage loans that are granted for nearly the full cost of building or purchase, better housing will get built in a shorter time. Thus from the standpoint of the broad economy, provision of formal finance has the capacity to increase the productivity of an important sector, the building industry, and the cities themselves.

Housing finance is not only good for the construction industry and for households, but, subject to the discussion below on stability and real estate crises, good for the financial sector as well. Were this not so, it would not be observed that the share of bank portfolios held in the form of housing loans, and particularly long-term loans, increases considerably with the level of economic development. At low levels of economic development, housing loans play almost no role in the financial system; among countries in the lowest income quartile, housing loans relative to all assets in the financial system are only 2.9 percent (median value), while for the countries in the next three income quartiles the corresponding figures are 10, 17, and 24 percent, respectively. Loans by the financial system for housing are estimated to represent, for the four income quartiles of countries, 11, 31, 45, and 91 percent of the annual volume of housing investment respectively, so that loans for housing become relatively more important for both the housing industry and the financial system as economic development proceeds.

### **3.2 Housing and Economic Stability**

Two aspects of housing and economic stability should be mentioned: the role of housing in domestic business cycles and the role of residential and commercial real estate in international banking crises.

Housing is the most volatile component of domestic investment in the U.S.; furthermore, investment is far more volatile than consumption. Thus, one would expect that housing is important to cycles in the economy. As recently indicated in a study of housing’s role in business cycles, “long-term growth is only one major goal of macroeconomic policy—stability is another.”<sup>38</sup> Residential and nonresidential investment in the U.S. economy differs greatly in their relationship to business

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<sup>38</sup> See Richard Green, “Follow the Leader: How Changes in Residential and non-residential Investment Predict changes in GDP.” This discussion is based on Hendershott, “Taxing and Subsidizing Housing.”



cycles and GDP. Whereas increases in residential investment “cause” increases in GDP (that is, residential investment leads), in contrast, changes in GDP “cause” changes in nonresidential investment (nonresidential investment lags). Thus, actions that would depress residential investment could trigger a recession. In contrast, actions that lead to excess stimulation of real estate production could unleash an inflationary boom. The lesson here—which will eventually be applicable to Poland as it is to the U.S. and other economies with large investments in the housing sector is to avoid abrupt or severe changes in housing policy.

The role of real estate in international financial and banking crises is the second key aspect of housing and stability.<sup>39</sup> Although most recently spotlighted in the financial crises of the Asian tigers, which then spread to Russia and Latin America, similar problems have occurred in the savings and loan crisis in the U.S. and banking crises in Scandinavia and Japan. The causal factors and chains of inter-related events are complex and will not be analyzed here. Suffice it to say, however, as pointed out by Bertrand Renaud, that while banking crises can happen without real estate crises and, similarly, real estate crises can happen without banking crises, the two together are extremely destructive and costly, and have figured prominently in the countries noted above.

Important lessons learned for Poland and other nations include continuing its efforts to promote macroeconomic stability; improve banking system regulation and supervision; improve transparency and disclosure; provide a strong legal system and a good information base; and attempt to maintain stability in property markets.

### **3.3 *Investment in Housing and Realistic Estimates of Housing Demand and Affordability in Poland***

Economists in the United States have debated for many years whether there is over-investment in the housing sector at the expense of more productive uses of capital. Mills estimated, for example, that the housing stock in the U.S. is at least 32 percent larger than the socially optimal level (or even twice its optimal level).<sup>40</sup> Hendershott takes exception to this estimate and places the level of over-investment in the U.S. at around 10 percent. Economists have even suggested

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<sup>39</sup> Please refer to Michael Lea, “International Banking and Real Estate Crises: Lessons for Poland”; Bertrand Renaud, “Property Cycles and Banking Crises: What Have We Learned?”; and Renaud, Zhang, and Koeberle, “How the Thai Real Estate Boom Undid Financial Institutions – What Can Be Done Now?”.

<sup>40</sup> See E.S. Mills, “Social Returns to Housing and Other Fixed Capital,” and Patric Hendershott’s “Comments” on this article.

that under-investment in housing in Korea, with capital applied to more productive uses, has enabled Korea to raise its GDP very quickly.<sup>41</sup>

Although the argument is not yet settled, there is an important lesson here for Poland: estimates of housing need must be developed in Poland based on appropriate estimates of housing demand. As has been argued elsewhere, the housing situation in Poland and other Eastern European countries has frequently been characterized as a “crisis,” with poor housing quality, crowding, and low levels of investment in housing relative to that thought typical of Western Europe.<sup>42</sup> Contrary to this viewpoint, the analysis suggests that housing in Central Europe is better in many ways than that of countries with comparable or higher incomes, and that recent declines in production and investment represent a rational accommodation to decades of distortion in Eastern European economies. Relative declines in housing investment and increases in sectoral investments in consumer goods, services, and telecommunications are easy to understand in light of the comparative pent-up demand in the latter areas relative to that in housing.

Nevertheless, it is likely at some point that most of the cumulative backlog of unsatisfied demand for goods and services other than housing will be largely satisfied. In preparation for that, it is important to begin to anticipate what is a reasonable and sustainable level of housing investment. In summary, if Poland does have a housing shortage, it is extremely doubtful that it is severe and may exist only in certain high demand areas.

As discussed, a poorly functioning housing sector retards growth in GDP. On the other hand, major over-investment is clearly not desirable either. Thus, it is important for Poland to revise the manner in which housing need is calculated from a “gap” approach to a realistic assessment based on demand and afford ability. Methodologies for making these estimates have been presented by the UIC team; we wish to emphasize again the danger in designing subsidy policies against an assumption of a severe housing shortage.<sup>43</sup> Relying on an inappropriate needs approach is likely to result in higher subsidies than necessary, subsidies too oriented toward new owner-occupied housing, and unnecessary frustration with low, but recovering levels of production.

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<sup>41</sup> See Green, Malpezzi, and Vandell, “Urban Regulations and the Price of Land and Housing in Korea.”

<sup>42</sup> See Hegedus, Mayo, and Tosics, 1996.

<sup>43</sup> Again, see Merrill et al., “The Feasibility of Estimating the Demand for Residential Mortgage Credit in Poland.”



Finally, we recommend that Poland consider both direct grants and a limited form of mortgage interest deduction to replace the current tax benefits. Whatever homeowner subsidies are chosen, however, must be analyzed in the context of the overall goals for the sector and the overall estimates of need.

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**ANNEX A**

**HOUSING AND THE ECONOMY**

**Stephen Mayo**

## **ABSTRACT**

Housing has important direct and indirect links to the economy. It may be a store of wealth, a generator of income, and a good that is linked to other markets and parts of the economy. Activities related to housing investment and consumption give rise to consumer and producer demands for other products, may harm or nurture labor markets, affect the financial sector by motivating savings and generating loans, and influence fiscal health, as housing serves both as an asset that can be taxed and a vehicle for the provision of subsidies. Housing is the greatest single form of "reproducible wealth," and has a role as a "store of value" and as a vehicle for capital appreciation.

Institutions, laws, and regulations are all critically important in enabling households to acquire housing, and should be designed to stimulate demand for housing purchases and ownership. It is important that housing wealth is realized, and that incentives associated with savings stimulate the broad-based ownership of housing. (In Poland, for example, relaxing rent controls and instituting housing allowances in their place is needed so that the cost of owning a home relative to renting is not prohibitively expensive, so that the demand for ownership and incentives to create a private rental sector can both be stimulated.) Finally, it will be critical to create conditions for expanding housing credit in a sound financial system, to provide residential infrastructure, and to insure a balance of public and private sector involvement, with competition encouraged.

The paper presents a series of quantitative analyses drawn from the Housing Indicators Project, a joint program of the World Bank and the United Nations Center for Human Settlements, which present the relationships between various housing aggregates and between housing indicators and the macroeconomy. The analyses are based on data from cities worldwide, including Warsaw and others in Central and Eastern Europe, for 1990 and 1994. Since these aggregates change only slowly, they generally remain valid for a considerable period. When feasible, more recent data on Poland has been provided by Edward Koz»owski, Cracow Real Estate Institute, and Rebecca Lawrence, Urban Institute.

This paper has been prepared as one of two supporting documents for a major paper "Housing and the Macroeconomy: Tax Reform and Alternative Subsidy Policies for Housing", which was prepared following a request to USAID from Deputy Prime Minister and Minister of Finance Leszek Balcerowicz. This is one of a series of papers prepared for the United States Agency for International Development's Poland Housing Finance Program, directed by Michael Lee.

## HOUSING AND THE ECONOMY

This paper describes what is known about the relationship between the housing sector and the broader economy in market-oriented and transitional economies. It is intended to provide a framework and data that can help establish a framework for policy initiatives and reforms designed to allow the housing sector to play a fuller role in the expansion of the Polish economy. The first emphasis is on describing the magnitude of economic activity generated within the housing sector and the principal circuits by which the sector is linked to the broader economy. The second is on describing the ways in which policy distortions in the housing sector influence, first, activity levels in the housing sector and, second, activities in the broader economy. The aim of the paper is to give a sense of the high stakes of getting policies right within the housing sector, and to suggest a rough set of guidelines for housing policy.

Housing's role in the economy depends on its role as a store of wealth, a generator of income, and a good that is linked to other markets and parts of the economy. The principal linkages to the broader economy are through the so-called "real" side of the economy, where activities related to housing investment and consumption give rise to demands for linked products such as building materials, residential infrastructure, public services, and home furnishings; through the financial sector, where housing serves both as a primary motivation for household savings and a generator of loans to finance its construction and purchase; and through fiscal circuits, where housing serves both as an asset that can be taxed (e.g. through property taxes) and a vehicle for the provision of subsidies.

Aside from direct linkages through these circuits, housing has important, and no less powerful, indirect linkages to the economy. Many of the most important indirect linkages result from the spatial distribution of housing, both within and among cities. The spatial distribution of housing, especially relative to the demand for housing in different places, has major implications for the behavior and efficiency of labor markets. When, for example, not enough housing is available in cities with growing employment prospects, artificially high housing prices restrict labor mobility and depress productivity. Similarly, when, because of housing shortages, households within a given city live in places other than their preferred locations, commuting costs can be substantially higher and information about job opportunities less than adequate. These outcomes raise the cost of doing business, impose costs on households, reduce urban productivity, and result in lower rates of labor force participation and higher levels of unemployment.

### ***Housing and Wealth***

Housing is the greatest single form of "reproducible wealth" in most modern economies. Reproducible wealth consists primarily of real estate, corporate equity (which accounts for most of the so-called "economically productive" capital stock

invested in plant and equipment), corporate and government bonds, consumer durables (especially automobiles), precious metals that have been mined and processed, and other commodities such as fine arts. In the 1980s, a survey of the world's reproducible wealth in eighteen industrialized countries responsible for most of the world's gross product, indicated that reproducible wealth was distributed as indicated in Table 1. "Real Estate," which consists of housing, farm real estate, and commercial real estate, was estimated to make up some 56 percent of the world's reproducible wealth (\$15.5 of \$27.7 trillion), with U.S. real estate comprising some 18 percent of the world's total reproducible wealth and non-U.S. real estate comprising some 38 percent in the early 1980s. Of the U.S. total, real estate was distributed as follows: housing—73 percent; farm real estate—13 percent; business (commercial) real estate—14 percent. Thus, U.S. housing stock by itself was estimated to have comprised some 13 percent of the world's reproducible wealth in 1984. Were similar proportions of housing as a fraction of all real estate to apply in non-U.S. real estate, some 41 percent of the world's reproducible wealth would have been estimated to be in the form of housing. This compares to an aggregate value of stocks and bonds on all of the world's major stock exchanges equal to some 23 percent of the world's reproducible wealth in 1984.

Table 1  
World Reproducible Wealth in the 1980s

Asset Class	Aggregate Value (US trillions)	Percent of Total
Real Estate	15,501.92	56
US	4,982.76	18
Non US	10,519.16	38
Corporate Equities	3,321.84	12
US	1,937.94	7
Non US	1,384.10	5
Fixed Income Securities	3,598.66	13
US	1,660.92	6
Non US	1,937.94	7
Durable Goods	3,045.82	11
US	1,107.28	4
Non US	2,214.56	8
Metals	830.46	3
Other	1,107.28	4
Total	27,682.00	100



Housing's role as a "store of value" is large not only in relation to other assets, but also relative to GNP. A simple way to evaluate the value of housing relative to GNP is based on the observation that the median value of housing relative to household incomes is on the order of from three to five in urban areas throughout the world. Since household incomes comprise about 60-65 percent of GNP in most countries, housing's value is on the order of from perhaps 1.5 to 3 times GNP in most industrialized countries.

Figures for particular countries in more recent years present a similar picture. For example, at the beginning of the recent Asian financial crisis, the aggregate capitalization of the Thai stock exchange was estimated to have been about \$44 billion, while the value of Bangkok metropolitan area real estate was estimated to have been about \$83 billion—nearly twice as high as the value of all publicly traded equities in Thailand. Housing accounted for 74 percent of the value of real estate—\$64 billion. The value of Bangkok real estate was, moreover, estimated to be equal to equal 45 percent of the 1997 Thai GNP. Figures for all Thai real estate would be considerably higher, given that Bangkok comprises only about 12 percent of Thailand's population.

In Poland, housing wealth relative to other forms of wealth and to GNP are likely to be of the same order of magnitude. The Housing Indicators Program, for example, estimated that annual rents for typical flats in Warsaw, if evaluated at "world prices" for housing of comparable quality would have been equal to about \$1100 in 1990, at a time when median household income in Warsaw was about \$2300 (and GNP per capita about \$1690). Were one to capitalize these rents at the typical rates at which rents are capitalized into housing values in market economies (a multiple of 20-25), the Warsaw housing stock in 1990 would have been valued at from \$22-27,000 for a median unit in 1990—about ten times typical household incomes and about six times gross city product per capita—figures that are even higher than those found in most market economies. It appears that since the economic and political transition has begun in Eastern Europe, adjustments in housing and other markets may have led to a fall in real rentals and housing values, perhaps bringing them more into line with figures in market economies, but this remains to be confirmed with further data. In any case, the value of housing and its role in the distribution of wealth and generation of incentives and income is likely to be at least as important in Poland as in market economies.

Figures on the role of housing as a share of wealth and relative to GNP are, generally speaking, so surprising to most macro economists that they are either ignored or heavily discounted. However, such figures are not only tolerably accurate and roughly representative of the situation in every modern economy, but of fundamental importance in understanding and managing those economies. To ignore them and their implications for the performance of many if not most economic aggregates within a modern economy would be mistaken, particularly as more becomes known about the linkages between the housing sector and the broader economy.

In the United Kingdom, for example, where there has been a legacy of heavy interventions by government in land and housing markets, researchers have found significant connections between practically every major economic aggregate and variables characterizing housing sector performance. What is of decisive importance, however, is that they have established that housing policy distortions affect first the housing market and then are propagated throughout the economy through a complex set of linkages. Studies in the U.K., for example, have indicated that housing market distortions have led to depressed rates of personal savings, higher interest, inflation, and exchange rates, and higher unemployment rates. Regarding the latter, it has been estimated that the structural unemployment rate in the U.K. is about two percentage points higher than comparable countries because of housing market distortions.

Similarly, economists who have studied the link between housing markets and labor markets in Poland have concluded that housing market distortions which have caused both low mobility rates and low vacancy rates have (1) raised wages in ways that are unrelated to productivity differences and (2) increased the Polish unemployment rate (where some 25 percent of the 1992 unemployment rate was attributed to the spatial mismatch between workers and jobs and inability to move to take advantage of job opportunities).

Assets motivate savings only insofar as the assets can be acquired and disposed of. The willingness of households to acquire housing as an asset depends on the price of assets, the costs of alternative housing arrangements such as renting or living with family members, the tightness of markets, propensities of households to sell or trade assets and to move, and arrangements for ensuring that rights of possession and transfer are clear and protected by law. Institutions, laws, and regulations are all critically important in enabling households to acquire housing. To the extent that housing assets can be financed based on future flows of income, they are more desirable to households. But for lenders to be willing to treat housing as collateral for mortgages, they must be assured that their rights as lenders are also protected, e.g., through procedures for foreclosure and eviction in the event of payment defaults. To the extent that tight housing markets make it difficult for households facing eviction to find alternative housing, the political cost of allowing lenders free reign over eviction may be high. Thus, for housing to play the full role it is capable of playing as an asset, a store of wealth, a motivator of savings, and a vehicle for capital appreciation, a number of market and policy conditions must be met.

One of the most important requisites for allowing housing wealth to be realized, and for incentives associated with saving for housing to be stimulated is that of creating incentives for broad-based ownership of housing. In Poland, only 40 percent of the housing stock was privately owned in 1990, and even after four years of transition, the proportion had risen only to 42 percent. However, by 1997, that proportion had risen to 62 percent of the housing stock nationwide. Ownership rates are lower in major cities; the rate of ownership in Warsaw in 1997 was about

52 percent, somewhat lower than the average ownership rate (65 percent) among 16 cities in market-oriented economies around the world with roughly comparable incomes in 1990. Indeed, the lowest ownership rate among the 16 cities was 50 percent in 1990. Facilitating ownership might involve a number of linked policy actions, but it is certain that as long as the ratio of prices associated with renting and owning do not change appreciably, incentives to purchase housing will be modest. Figure 1 indicates the relationship between the estimated relative price of purchasing or renting a "typical" dwelling unit and the rate of home ownership in a sample of countries with incomes close to those of Poland in 1990. Socialist or reforming socialist countries such as Algeria, the Czech Republic, Hungary, and Poland all had substantially higher costs of owning relative to renting than most market oriented countries, and had correspondingly lower ownership rates. As the figure indicates, the more expensive owning is relative to renting, the lower the rate of ownership. Unpublished statistical analyses from the Housing Indicators Program indicate that a doubling of the relative cost of owning and renting (such as would result from a 50 percent reduction in rents due to rent control) results in a 30 to 35 percent reduction in the rate of ownership.

It appears likely that the transition period has seen a fall in the typical ratio of house-price-to-income in most Eastern European cities, but only modest increases in ratios of rent-to-income. Thus, the relative price of renting and owning may not, particularly in Poland, have shifted enough to provide strong market-based incentives to demand new housing or even to shift from being a renter to an owner. Indeed, falling housing prices in the transitional period make housing more affordable for purchase but also decrease its status as a store of value and a source of wealth accumulation. In designing institutions and policies to stimulate demand for housing purchases and ownership, far more careful analysis than has yet been done of how to engineer changes in housing values and rents (e.g., through relaxing rent control and instituting housing allowances in their place) is called for. Failing changes in the relative prices of renting and owning, it will be difficult to stimulate broad-based demand for ownership. Without stimulating demand for ownership, it will be difficult to unlock the potential of the housing sector to serve as a motivator for savings and source of wealth accumulation for the population.

Insert figure 1

## ***Housing and the Generation of Income***

Housing's value to the economy, reckoned in terms of annual flows, is made up of two principal components—housing investment and rents. Housing investment in most market economies typically ranges from 2-8 percent of GNP and varies non-linearly (in an inverted U-shape) with a country's level of economic development. At modest levels of economic development, housing investment is typically no more than 2-3 percent of GNP. Investment in housing relative to other investments rises rapidly with economic development, however, so that countries of Latin America, North Africa, and the Pacific Rim typically have ratios of housing investment to GNP of from 5-8 percent. Among industrialized countries, housing investment is lower—typically from 2.5-5 percent. As a share of gross fixed capital formation, housing's share also rises and then falls with economic development, typically representing no more than about 10 percent of gross capital formation at low levels of economic development, rising to between 30 and 40 percent at intermediate levels of development, and falling, modestly, to between 20 and 35 percent among industrialized countries. Figure 2 illustrates the relationship between housing investment and Gross City Product per capita in 1990 in market economies, indicating that the ratio of housing investment to gross city product per capita follows the same pattern as that between housing investment and gross national product, with the ratio first rising then declining with levels of economic development.

Annual fluctuations in housing investment are, however, considerable, with variations in both housing starts and housing investment rising and falling by 50-100 percent across business cycles in industrialized countries. In the United States, for example, housing starts were 1.07 million in 1982 with housing investment of \$124 billion, while four years later, after the country emerged from a recession, starts were 1.81 million and investment \$226 billion.

In the transition economies as a whole, housing investments relative to GDP are estimated to have fallen from 3.6 percent to 1.8 percent (50 percent) between 1990 and 1994, with a corresponding fall in physical output. The decline in housing investment to GDP in Poland was larger—from 5.2 percent in 1990 to 1.4 percent in 1996, a drop of over 65 percent. Still, as large as these drops in investment seem, they are not dissimilar to those experienced in industrialized countries over a normal business cycle. Consequently, it is not unreasonable to expect that a considerable recovery might take place once other structural adjustments such as those involving satisfying pent-up investment and consumer demand in other sectors of the economy, have occurred.

Rents as a share of household incomes and as a share of national income are more stable than housing investments. Rents as a share of household incomes are from 5-10 percent at low levels of economic development, rise to between 25 and 30 percent at intermediate levels of development and fall modestly to between 20 and 25 percent of incomes among industrialized countries. Since household

incomes comprise about 60-65 percent of GNP, rents as a share of GNP vary from 3-6 percent of GNP at low levels of economic development, rise to between 15 and 20 percent at intermediate levels and fall to between 12 and 15 percent among industrialized countries.

Insert figure 2

Combining the economic contributions of housing investment and rents, the direct contribution of the housing sector to the economy ranges from less than 10 percent at low levels of economic development to between 20 and 25 percent at intermediate levels of development, and falls to between 15 and 20 percent among industrialized countries. At Poland's level of development, it should be expected that the "normal" contribution of the housing sector to GDP should be on the order of 20-25 percent. Whether or not this "normal" figure is attainable or desirable depends, however, on the socialist legacy of the Polish housing sector.

In socialist and formerly socialist economies, the market forces responsible for creating the strong regularities between both housing investment and rents and the overall level of economic activity did not exist, with decisions concerning levels of investment, housing quality and type, and rent levels largely determined by administrative fiat. Among socialist countries in 1990, there was no distinct pattern between the level of economic development and either housing investment or the rent-to-income ratio. Overall, levels of investment in socialist and non-socialist countries have tended to average about the same, with average ratios of housing investment to Gross City Product in 31 major cities of non-socialist countries averaging about 0.049 in 1990 and corresponding ratios in 12 socialist cities averaging about 0.044. But this was a product of housing investment levels having been being relatively higher among socialist countries at low levels of development, and relatively lower at intermediate levels of economic development.

These investment patterns in socialist countries have left many of them with a housing stock that is of higher quality than that found in many market economies, by the time they have reached intermediate levels of economic development. This is reflected in many different housing indicators, particularly those having to do with crowding or floor space, but also having to do with measures of housing quality and accessibility to residential infrastructure. Among a sample of 16 countries with incomes relatively similar to Poland's in 1990 (with GNP per capita ranging from US \$1240 to 2780), Poland's level of GNP per capita (\$1690) ranked it tenth and its level of household income ranked it 16th (last) among the comparators. However, in terms of three measures of crowding, households per dwelling, persons per room, and floor area per person, Poland ranked ninth (1.085 households per dwelling), first (0.94 persons per room), and fourth (17.4 square meters per person) respectively. Thus, while "doubling up" measured in terms of households per dwelling was about at the level that was to be expected given its level of economic development, Poland ranked well ahead of its expected position in terms of the other crowding measures. See Figures 3-5 which illustrate the relationship between the three crowding measures and GNP per capita in 1990 for a sample of cities in the Housing Indicators Program.

Similarly, in terms of the estimated "world price" of Polish housing (a quality measure, measured by a hedonic housing price index), Poland ranked ahead of where it would have been expected—with housing in Warsaw having an estimated "world price" of about \$1130 in 1990, ranking it seventh among its income

comparators (ahead of Chile and Mexico and on a par with Brazil and Venezuela, all of which had higher incomes). While this is well behind the level of eight representative Western European cities where estimated "world prices" averaged \$4136 in 1990, about four times the level of Poland, incomes in Western Europe were from 13-15 times higher, GNP per capita averaged about \$21,000, and household incomes averaged about \$33,000. See Figure 6 which illustrates the relationship between housing quality (measured by the estimated "world price" of housing) and income.

Insert figure 3

Insert figure 4

Insert figure 5

These comparisons are relevant in that an evaluation of the prospects for the housing sector to play a greater role in Poland depends considerably on its starting position with respect to the balance between effective demand and supply of housing. If, for example, it were the case that Polish housing was of considerably lower quality than expected, given its resources and demographic situation, and if housing production and investment were correspondingly lower than expected, then it could be expected that it would be comparatively easy to stimulate the sector to expand and play a greater role in Poland's contemporary economy. If, on the other hand, housing's position is good relative to expectations (in terms of demographics and resources), and production and investment depressed as part of a rational response to changing market conditions, then it would be more difficult to stimulate the sector.

As we have argued elsewhere, the housing situation in Poland and other Eastern European countries appears frequently to be characterized as a "crisis," with poor housing quality, crowding, and low levels of investment in housing relative to that thought typical of Western Europe. Contrary to this viewpoint, we have found that housing in Eastern Europe is better in many ways than that of countries with comparable or higher incomes, and that recent declines in production and investment represent a rational accommodation to decades of distortion in Eastern European economies. Relative declines in housing investment and increases in sectoral investments in consumer goods, services, and telecommunications are easy to understand in light of the comparative pent-up demand in the latter areas relative to that in housing.

Nevertheless, it is likely at some point that most of the cumulative backlog of unsatisfied demand for goods and services other than housing will be largely satisfied. In preparation for that, it is important to begin to anticipate what is a reasonable and sustainable level of housing investment, and to begin putting in place regulations, policies, and institutions that can enable the housing sector to easily reach its potential. In this regard, it seems relatively clear that the emphasis should be more on creating the appropriate policy mechanisms than fixing on a particular target level of investment which is likely to be both unknowable and arbitrary. Among the mechanisms that should be considered are some which are already happening and simply need encouragement and support. For example, during the transition major changes have been made in the organization of the housing sector, particularly in terms of the degree to which private developers are responsible for housing construction. From 1990 to 1994, the share of housing built by private developers nearly doubled, from 26 to 46 percent of new housing, and to 55 percent of new construction by 1997. At the same time, the share built by the public sector fell from 46 to 10 percent, and by 1997 to just 7.3 percent. Continuing support for private sector participation in land development and housing and lessening of explicit support for public sector developers is appropriate. As of 1997, about 38 percent of housing was being constructed by cooperatives. The role of cooperatives in developing housing in Poland, which has expanded during

the transition, should be carefully assessed in terms of their efficiency relative to the private sector.

The single most important policy requirement for ensuring that the housing sector is able to expand to make a major contribution to the economy is that the regulatory climate for the housing sector must be rationalized to facilitate rather than encumber expansion of activity. In work done throughout the world, it has been found that restrictions on the "supply side" of the housing sector are the most inimical type of policy failing. Alternatively, a well-functioning housing supply system is able to contribute in a major way toward economic development.

Insert figure 6

In the World Bank's "Housing Policy Paper", the three key areas for rationalizing the supply side are (1) infrastructure provision—ensuring that residential infrastructure is efficiently provided in advance of demand for new residential developments, (2) the regulatory framework for land development and housing construction—ensuring that bureaucratic requirements (e.g., land use, zoning, and building codes) necessary for approving residential developments are transparent, efficient, and fair, and (3) the organization of the building industry—ensuring that there is an appropriate balance of public and private sector involvement in all aspects of the residential building industry (building materials, land development, and house construction) and that competition is encouraged. When the housing supply system functions well, increases in demand for housing are translated into more and better housing with little or no increase in housing prices; when the supply system fails to work properly, housing development lags and demand is translated into little new housing and large price increases.

The latter situation has increasingly come to describe the situation in many industrialized as well as developing countries. The most devastating example of this at the moment is in the boom and bust land and property markets of Japan, where a stringent and unresponsive regulatory system coupled with inappropriate fiscal incentives led to a dramatic run-up in land and housing prices in the 1980s, only to be reversed in a stunning crash after 1990. The catastrophic effects of the post-1990 Japanese "bust" are evident in every day's newspaper. What is generally not appreciated by macro economists who have been trying to understand the current Asian financial and economic crisis is the role that property markets, and in particular their behavior under the influence of highly inappropriate regulatory frameworks, have played in precipitating the crisis and impeding its resolution. What is also unappreciated is the degree to which the regulatory framework for land and housing development in Eastern Europe parallels that of Japan and several other Asian economies that have undergone devastating boom and bust cycles in land and property markets.

In particular, the state's role in land provision and housing development, even after a number of years of transition, continues to limit competition in the housing sector; complicated development regulations make it difficult for many private firms to develop land or build housing; and delays in providing residential infrastructure (in part the result of inadequate fiscal mechanisms for cost recovery) raise the costs of housing development and reduce productivity in the construction sector. As consideration is given to promoting the role of the housing sector in Poland's economic affairs, all of these areas must be carefully evaluated to ensure that an appropriate "enabling environment" is provided.

### ***Housing and Financial Development***

At modest levels of economic development, almost all housing is self-financed, with sources of funds for land acquisition and building construction coming from private resources. Even when access is available only to informal

finance houses continue to get built. Decade on decade of statistics in most countries of the world, even the poorest, indicate that if the number of households has changed by X percent, the number of dwellings has changed by very close to X percent. On the other hand, access to finance, and especially to long-term finance secured by a mortgage loan, has the capacity to dramatically change the pace of construction, allowing housing to get built more quickly in response to demand. As Bertrand Renaud observes, "Cities are built the way they are financed." When they are financed from family resources that are modest and unpredictable, modest housing will get built at an unpredictable rate. When housing is financed by formal construction and mortgage loans that are granted for nearly the full cost of building or purchase, better housing will get built in a shorter time. Thus, from the standpoint of the broad economy, provision of formal finance has the capacity to increase the productivity of an important sector—the building industry.

In Poland, lack of access to formal finance has contributed to what appears to be a highly unproductive construction sector. During the 1980s, for example, it was typically the case that about six dwellings were under construction for every one that was being completed annually—suggesting that a typical time of construction was about six years. Since the transition, it appears that the situation has worsened somewhat, with about eight dwellings under construction for each annual completion in 1997. While finance is only one resource that slows the pace of construction (others are slow infrastructure provision, unavailability of building materials, and regulatory delays), it seems clear that limitations on both construction period finance and mortgage finance slow the pace of construction enormously. By comparison, typical construction times in North America are from 8 to 9 months and in Western Europe are just over a year. It would be appropriate to evaluate the degree to which the productivity of the building sector could be increased by removal of various constraints to responsive construction, and to then design reforms to deal with the most serious constraints. Finance is certain to be one of them.

Housing finance is not only good for the construction industry and for households, but good for the financial sector as well. Were this not so, it would not be observed that the share of bank portfolios held in the form of housing loans, and particularly long-term loans, increases considerably with the level of economic development. Figure 7, for example, shows the way that the so-called "Housing Credit Portfolio," the share of the consolidated portfolio of government and private financial institutions held in the form of housing loans, varies with level of economic development. Data are for 1990, and are from the Housing Indicators Program. At low levels of economic development, housing loans play almost no role in the financial system; among countries in the lowest income quartile, housing loans relative to all assets in the financial system are only 2.9 percent (median value), while for the countries in the next three income quartiles the corresponding figures are 10, 17, and 24 percent respectively. Loans by the financial system for housing are estimated to represent, for the four income quartiles of countries, 11, 31, 45,

and 91 percent of the annual volume of housing investment respectively, so that loans for housing become relatively more important for both the housing industry and the financial system as economic development proceeds. Among industrialized countries, the United Kingdom and the United States had the highest portfolio concentration of loans for housing in 1990—37 and 44 percent respectively. Among developing countries South Africa's financial system had 39 percent of its assets in the form of housing loans.

Poland, with 18 percent of financial assets estimated to be held in housing loans in 1990 (and with about the same share estimated in 1994, appeared to have a slightly higher housing credit portfolio than might be expected at its level of economic development. Other countries with similar levels of GNP per capita include several Latin American countries in which the average value of the housing credit portfolio was 20 percent, although Brazil had 33 percent of its financial assets in the form of housing loans.

In some Latin American countries, as well as some of the rapidly growing countries of Asia, the rate of expansion of housing lending is often dramatic once conditions allow banks to feel confident in lending for housing. In both Thailand and Malaysia, for example, the volume of housing lending expanded at a 30 percent annual rate of increase for more than a decade, in Malaysia's case taking housing from a portfolio share of less than 1 percent in the mid-1970s to 22 percent in 1990.

Creating the conditions for expanding housing credit requires having an appropriate institutional and policy framework both within the financial sector and the housing sector more generally. Among the financial system factors that help create a favorable environment for expansion of housing credit are having a strong banking system with adequate supervision, sound underwriting practices, careful management of administrative costs, and sound management of both assets and liabilities. Positive interest rates for lending and subsidies that are not channeled through the banking system are also necessary for housing credit to expand in a sustainable fashion. Within the housing sector, it is important that private property rights be well established for both borrowers and lenders, such that the rights and expectations of each are transparent and, in the case of disputes, capable of being resolved quickly and without a great deal of administrative expense. In particular, this means that financial intermediaries should be assured of straightforward procedures for foreclosure and eviction in the event of loan defaults. Another important requirement for housing credit expansion is that there should be adequate competition among financial intermediaries to assure that intermediation is efficient.

Insert figure 7

Creating opportunities for a number of financial institutions to compete in supplying housing credit allows many of the advantages to be gained that have been found in other countries where housing loans have become big business. Indeed, over a considerable range of financial and economic development levels, housing credit has become among the best and most profitable types of lending.

## **Summary**

This paper has attempted to demonstrate that the housing sector is a key sector of the economy, whose role is often under-appreciated by planners and economists. Housing in most economies is the single most important category of wealth, and its distribution and pricing have enormous implications for both economic efficiency and distribution. Worldwide, it was estimated that housing comprised on the order of 40 percent of the world's reproducible wealth in the 1980s; nothing suggests that it is less important today. As such it is a prime motivator of savings and, as financial systems increasingly permit housing to be used as collateral in securing loans, it is a source of financing for many other areas of economic activity. To paraphrase Robert Buckley, housing is not just about shelter anymore, and housing finance is not just about housing. Ensuring that the housing sector is structured in a way that motivates savings, that creates conditions for secure appreciation of capital, that easily permits recycling of accumulated equity in housing, and that contributes to both economic and financial sector development are major challenges for economic planners.

Housing in Poland is worth a great deal, just as it is in other countries, but much of its worth was unrealized and could not be recycled because of a legacy of policies that removed housing from the economic sphere during Poland's socialist past. Currently, housing does not fully serve as a motivation for savings the way that it could under alternative institutional and policy arrangements. For housing to achieve its full potential as a store of wealth and as a vehicle for capital appreciation and recycling requires putting in place a set of incentives to promote broad-based private ownership of property and market-based housing transactions. Despite privatization in Poland and an expansion of private participation in the residential building industry, a great deal more can be done to create market-based incentives for household savings and home ownership. The paper suggests, for example, that the price of owning in Poland is high relative to the cost of renting. This has two components—high purchase prices of housing because supply is restricted relative to demand, and rents that are too low because of rent control. Complementary actions that can enormously change household motivations for saving and home purchase would be relaxing rent controls and continuing efforts to provide an appropriate set of legal, regulatory, and institutional reforms to free up the supply of housing.

Housing investment and housing rents are also important parts of the annual economic flows within Poland. But housing investment levels are depressed and rents are more imputed than real. It is to be expected that housing investment will

recover in the direction of levels seen before the transition, although the time that this will require depends critically on how long it takes other aspects of pent-up demand for consumer goods, services, and telecommunications to be ameliorated. More important than setting a target for housing investment is to put in place systems of laws, regulations, and institutions that allow housing to rise (or fall) to its own level in a way that responds easily to demand shifts. This will require, in particular, that attention is given to the redesign of the housing supply mechanism in Poland—rationalizing public and private sector roles, creating responsive systems of infrastructure supply, creating a transparent, efficient, and fair regulatory framework governing land use, zoning, and building codes, and rationalizing the building industry by encouraging greater competition and minimizing the direct role of government in housing delivery. Trends toward greater privatization of house building are to be encouraged, and the role of housing cooperatives in the delivery process should be carefully scrutinized from the standpoint of both equity and efficiency.

Finally, the potential of a vigorous and well-functioning housing finance system to contribute toward more rapid housing improvements, a more efficient building industry, and a sounder financial system should be seen as an important part of the policy and institutional reform agenda. Housing finance in transition countries has been a far less dynamic contributor to the health and expansion of the financial system than is the case in countries with vigorous and competitive housing finance institutions. For the housing finance system to expand to its potential requires reform both within the banking sector and the housing sector. In particular, Poland should continue its already significant efforts to achieve a well-run banking system with appropriate supervision and sound banking principles, together with systems of private property rights which protect both borrowers and creditors. These are an essential part of the framework needed to provide an enabling framework for the housing finance system.

While it has not been possible to adequately quantify here the effects of housing policy reform focusing on a macroeconomic agenda, it should be clear that the stakes of good policies and institutions are high. Lessons from other parts of the world show the costs of policy failures, but also the considerable successes when policies are well made and well implemented. In many cases, policy and institutional decisions need to be informed by more careful analysis of available data, and in some cases new data collection efforts appear warranted. With careful analysis and consideration of policy options, it should be possible to considerably improve the macroeconomic contribution of the housing sector to the Polish economy.

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**ANNEX B**

**TAXING AND SUBSIDIZING HOUSING**

**Patric H. Hendershott**

## **TAXING AND SUBSIDIZING HOUSING<sup>44</sup>**

Home ownership is tax-favored in all countries because the return from the asset is largely not taxed. Most countries do not tax capital gains on houses, and the (imputed) rents that owners pay themselves rather than landlords are taxed lightly, if at all. Many countries tax favor ownership in additional ways: some countries allow mortgage interest to be deducted (the U.S. and most Western European countries); some subsidize the interest rate on new construction (e.g., Sweden); and some subsidize first-time homeowners (e.g., Finland and Ireland currently and Australia during the 1980s).

Many countries also subsidize rental housing. The subsidies include: housing allowances or rent supplements,<sup>45</sup> below-market interest rates for new construction, including rehabilitation (again Sweden is an example), and, in a few countries during some periods, relatively low taxation of rental income (e.g., tax depreciation allowances or write offs that exceed economic depreciation). Some countries also have rent controls. While these are temporarily advantageous to sitting tenants, controls reduce the housing stock, as opposed to the subsidies listed above that tend to expand the stock, and are thus fundamentally detrimental to rental housing.

In this paper, I analyze the workings and rationales for most of these subsidies. Section 1 deals with the ownership subsidies including their impact on housing demand. Section 2 considers rental subsidies. A concluding section takes a broader perspective, looking at the role of housing in the economy and the relative costs and benefits of subsidizing homeowners and renters.

### **SECTION 1: SUBSIDIES FOR HOMEOWNERSHIP**

This section is divided into three parts. The first discusses the nontaxation of imputed rents and the mortgage interest deduction, and the second discusses other ownership subsidies. The third briefly considers the impacts of the various subsidies on housing consumption, house prices, and homeownership.

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44 Prepared for USAID, March 1, 1999.

45 While most housing allowances are means tested and go to renters, in some countries (e.g., France and Norway) allowances are also available for owners.

## ***The Nontaxation of Imputed Rents and the Mortgage Interest Deduction***<sup>46</sup>

\_\_\_\_\_The fundamental tax advantage to owner-occupied housing is the generally low taxation of the return on the equity invested in the house. Virtually no European country taxes capital gains and the U.S. excludes the first \$500,000 in gain. Further, imputed rents are taxed in only a few countries. The Netherlands has about the heaviest tax, and it assumes rents to be only 1.7 percent of value, which, with a 30 percent tax rate, means that taxes would be only 0.5 percent of value. A number of countries have property taxes (Sweden's is 1.7 percent of value), although often they are collected at the local level (the U.S. has a local one percent tax, on average). A property tax is equivalent to a uniform-rate tax on imputed rents. Follain, Ling and McGill (1993) and Bourassa and Hendershott (1994) show that a tax on imputed rent would be progressive for the U.S. and Australia, respectively.

\_\_\_\_\_The deductibility of mortgage interest expense from the taxable income base is *not* the fundamental source of the tax subsidy to owner-occupied housing. In fact, if returns to housing were taxed, the deductibility of mortgage interest would not be considered a tax advantage, but rather an appropriate business deduction. Moreover, the mortgage deduction is of no value to some households. Consider a household whose marketable wealth equals or exceeds the value of its house and whose best alternative investment is home mortgages of other households (e.g., GNMA securities in the U.S.). The ability to borrow mortgage money, the interest on which is deductible, in order to invest in mortgages, the interest on which is taxable, is obviously of no value.<sup>47</sup>

This is not to say that the deductibility of household interest payments is of no value to many households, or that removal of this deduction from the tax statutes would have no impact on the demand for owner-occupied housing. Rather, the deductibility of interest is a means of extending the fundamental tax advantage of owner-occupied housing, the nontaxation of the return on equity invested in housing, to the numerous less wealthy households who cannot finance

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46 This logic of this section draws heavily on Hendershott (1983). See also Laidler (1969) and Woodward and Weicher (1989). The data on European countries come from Turner, Jakobsson and Whitehead (1996). See also Lea, Dubel and Welter (1997).

47 This is especially true if higher income households cannot deduct the interest at as high a tax rate as they pay taxes on interest income (see the text on this). On the other hand, insofar as households can borrow at fully taxable rates and invest in *equally risky* tax-sheltered securities, the deduction of mortgage interest *may* have value to such households.

their real assets entirely with equity.<sup>48</sup> Because of this, most countries (but not Australia, Canada, Iceland, and New Zealand) allow a mortgage interest deduction, although many limit it to a fixed amount or allow the deduction to be taken only at a relatively low tax rate, say 28 percent (Finland allows deductibility at this rate for repeat buyers, but at 30 percent for first-time buyers).

In a recent paper, Follain and Melamed (1998) contend that removing the mortgage interest deduction in the U.S. wouldn't gain cost the Treasury nearly as much revenue as is customarily assumed, i.e., the extension of the tax advantage to the less wealthy is not that costly. Their simulation model of the demand for mortgage debt predicts that removing the deduction would reduce mortgage debt by 40 percent and that the decline would be significantly more at higher income levels – only 18 percent at the \$22,500 level, but 54 percent at \$55,000 and 69 percent at \$110,000. With lower mortgage debt, especially of those with higher income, they estimate the pick up in tax revenue from removing the deduction to be only a quarter to a third of what it would be without any pay down in mortgage debt. The simulated reduction in mortgage debt seems plausible.<sup>49</sup> After all, the average loan to value ratio in Australia, which does not have deductibility, is less than half the average in the U.S., with deductibility, 0.14 versus 0.41.

Whether the house is financed by equity or debt, the magnitude of the tax advantage is directly related to the household's marginal tax bracket and to the level of nominal pretax returns in the economy; the higher the bracket or the level of returns, the more valuable is the nontaxation of the returns. Because the tax advantage increases as the marginal tax bracket of the household increases, the demand for owner-occupied housing is greater the higher the tax bracket of the household. The tax advantage is clearly less in countries with flat (low) tax rate schedules. Shifting to a lower tax rate income tax structure is the primary available avenue through which most countries can reduce the subsidy to owner-occupied housing.

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48 The deductibility is thus analogous to safe-harbor leasing in the U.S., which allows firms without taxable income to pay lower effective equipment lease rates. That is, the tax credits and accelerated write-offs available to profitable and slowly or moderately growing firms are effectively made available to nonprofitable and rapidly growing firms. The underlying tax credits and accelerated write-offs, not the leasing, are the fundamental source of the tax advantage.

49 However, the loss in tax revenue is may be overstated insofar as the taxes previously paid on the income from funds used to pay down the mortgage debt are less than the taxes saved when reducing mortgage debt in response to introduction of the mortgage interest deduction.

### ***Some Other Ownership Subsidies***<sup>50</sup>

Young households with little wealth for a downpayment are sometimes the explicit target of government policy, and this is especially true during periods of high inflation and nominal interest rates when real mortgage payments are initially very high relative to income (the mortgage tilt problem).<sup>51</sup> Two examples of such efforts are the First Home Owners Scheme (FHOS) adopted in Australia in 1983 and currently available in Ireland, and the Swedish interest rate subsidies for new construction initiated in 1975 (the other Scandinavian countries, France and Austria also have interest rate subsidies for new construction). The Australian FHOS and the Swedish interest rate subsidies are discussed in turn.

The FHOS provided first-time owners with nearly \$6000 in present value of benefits if their taxable incomes were less than 130 percent of average male weekly earnings and the household head had two or more dependents. Without dependents, the benefit still exceeded \$4000. The \$6000 was roughly eight percent of the mean value of a three-bedroom house. Borrowers could take the subsidy as an up-front lump sum, a cash flow subsidy declining over five years, or a combination. That is, the subsidy was designed to address either the downpayment constraint or the cash-flow constraint. Five-sixths of households choose the lump sum only. The value of the subsidy was eroded by inflation during the remainder of the 1980s and the program was eliminated in 1990.<sup>52</sup> Bourassa, et al (1994) estimate that the program caused the ownership rate for 21-25 year olds to rise from 28.5 to 37.1 percent. Put another way, it accelerated the time to first ownership by two years.

Sweden has subsidized new construction since 1975.<sup>53</sup> Loans of 95 percent of “approved building costs” were given to purchasers of new houses or major renovations that complied with government minimum and maximum standards (roughly 85 percent of new units qualified). The loans had an initial interest rate of 5.5 percent, which rose by 0.5 percent per year (the subsidy addressed the “mortgage tilt problem” during the 1975-85 inflationary period). During the 1981-92

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50 Much of this discussion draws heavily on Turner, Jakobsson and Whitehead (1996).

51 For a discussion of the downpayment and income constraints and how they interact to affect housing demand, see Haurin, Hendershott, and Wachter (1997).

52 Ireland currently has roughly a 5 percent downpayment subsidy for first time homebuyers.

53 This paragraph is based on Englund et al (1995) and Burger et al (1999). Sweden taxed imputed rent, although rent was estimated to be only one percent for most households (it jumped to about four percent for quite large houses), until its recent switch to a property tax.

period, market interest rates varied between 12 and 16 percent. The favorable financing transferred with the house when it was sold. Under plausible assumptions, the present value of the subsidy was 15 to 25 percent of house value. Legislated increases in the initial interest rate and declines in nominal market interest rates in the middle 1990s have substantially eroded this subsidy as well as other interest rate subsidies in Europe.

That the Australian FHOS was abandoned within a decade and Swedish subsidies (and those of other Scandinavian countries) were sharply curtailed after roughly two decades suggests that politicians will, sooner or later, recognize the limits to subsidizing owner-occupied housing. Rather than subsidizing first-time home buyers with grants or substantial below-market interest rates, many countries have established high government-sponsored loan-to-value ratio loan insurance programs to allow buyers to finesse the downpayment constraint problem. These programs need not be subsidized (e.g., the U.S. FHA program), although often a shallow subsidy is involved.

### ***The Impact of Subsidies to Owner-Occupied Housing***

The favorable tax treatment of owner-occupied housing results in increased demand. The increased demand can lead to increased housing consumption, but this need not be the case owing to capitalization effects. Berger et.al. (1999) provide evidence that the Swedish interest rate subsidies were fully capitalized into house prices (the original purchaser of the subsidized new construction capture all the subsidy). Capozza, Green and Hendershott (1999) argue that owner-occupied housing subsidies are fully capitalized into urban land prices. That is, declines in real after-tax interest rates, including those caused by the introduction of interest rate subsidies, would raise land prices, not housing consumption. Of course, their analysis would not hold in rural areas where additional land can be readily developed.

The removal of subsidies would have the opposite effect in this framework. House prices, not housing consumption, would decline. And cuts in marginal tax rates, as would occur in the movement to a flat tax (lower tax rate schedule, but fewer deductions) would also lower house/land prices.

## **SECTION 2: SUBSIDIES FOR RENTAL HOUSING**

Subsidies for rental housing can occur on the demand side (housing allowances) or on the supply side (direct subsidies, such as below-market financing rates, of new construction or light taxation of rental housing generally). Virtually all countries have means tested housing allowances for renters. Many European countries have also had substantial interest rate subsidies for new construction. For example, Sweden's 1975 program had an initial interest rate of 2.7 percent and

only 0.25 percent annual increases.<sup>54</sup> But these interest-rate subsidies have been greatly reduced during the last decade. Because housing allowances and interest-rate subsidies are fairly well understood, only the taxation of rental housing investments will be analyzed here. The key questions are: what tax depreciation allowances and interest expenses ought to be deductible from rental income and how should capital gains be taxed in a “neutral” tax system? If one wishes to subsidize rental housing investment through the tax code, then greater than neutral tax depreciation deductions need to be allowed and less than neutral capital gains taxation should be imposed.

In the U.S. (and presumably elsewhere), tax depreciation has always been based on *historic* cost (price in dollars at date of purchase). However, the correct depreciation deduction is economic depreciation, which is based on *replacement* cost (price in dollars when depreciation is occurring). Say that a building is viewed as “wearing out” at  $d$  percent a year and inflation is  $p$  percent annually. The correct depreciation deduction per dollar of original investment  $t$  years after the purchase is  $TAXD_t = d(1-d)^t(1+p)^t$ . While depreciation at historic cost decreases over time, the constant rate  $d$  being applied to a shrinking base, depreciation at replacement cost tends to increase owing to inflation expanding the base (and indeed does rise if the inflation rate exceeds the depreciation rate— $p > d$ ).

Say that  $d$  and  $p$  each equal 0.025. Economic depreciation per dollar of investment is then just  $d$  or 2.5 percent a year forever, which is 40 year straight line at historic cost or roughly the current U.S. tax depreciation schedule (allowing trading and rebasing continues the depreciation forever). But this is only because  $p$  is low. At the higher inflation rates existing during the mid1960s to mid1980s, a shorter tax life would have been appropriate. For plausible values of real interest rates and depreciation, the “neutral” tax lives associated with different expected inflation rates are (see the Appendix)

inflation rate	1.5	3	8	13	1	8
30 50						
tax life	37	30	21	16.5	14.5	12 10

That is, with the current 1.5 percent U.S. inflation rate, a tax life of 37 years is appropriate, roughly the current 39 year tax life. But with the 13 percent inflation that existed in the U.S. in the early 1980s, a far shorter tax life of 16.5 years would have been appropriate, and with 50 percent inflation, only a 10 year life is appropriate. The key point is that the appropriate tax life varies with the inflation rate and can be quite short at high inflation rates.

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54 The deeper interest-rate subsidy for renter than owner housing was an attempt to counterbalance the nontaxation of the returns from owner-occupied housing – to treat the two tenures neutrally.

The payment of *real* interest is a necessary cost of earning net operating income. Payment of the *inflationary premium* built into interest rates, on the other hand, might better be viewed as the cost of earning inflationary capital gains on the structure. If capital gains were taxed concurrently, the higher interest payments would approximately offset the capital gain, resulting in no net tax consequence. But because the capital gain is deferred, the inflationary premium built into mortgage interest rates provides a tax deferral benefit. Moreover, if the capital gains tax rate is lower than the tax rate at which the mortgage interest is deductible, as is currently the case in the U.S., then a conversion benefit also exists.

One rationale often espoused for a generally lower tax rate on capital gains than on regular income is that only real capital gains should be taxed. This ignores the fact that nominal, not real, interest is deductible, and it is immediately deductible, whereas capital gains are taxed only upon sale. If real estate were 100 percent debt financed and nominal interest were deductible, the capital gains rate should *exceed* the regular income tax rate to offset the delayed taxation of capital gains. And this is true regardless of whether inflation is high or low.

The above discussion is relevant to the taxation of business investments generally, not just rental housing. How rental housing investment ought to be taxed within a specific country should depend largely on how other business investments are taxed. For example, if no tax depreciation is allowed for nonresidential structures, then none should be allowed for rental housing. And if nominal interest is deductible for other investments, it should be deductible for rental housing.

### **SECTION 3: BROADER ISSUES**

Here, we consider two topics that are relevant to the optimal taxation/subsidization of housing: the role of housing in the economy and whether one tenure form should be favored relative to the other.

#### ***Housing and the Economy***

Residential investment is a significant component of Gross Domestic Product (GDP), generally ranging from four to eight percent of GDP in developed countries. Moreover, it is the most volatile component of investment, and total investment is far more volatile than consumption (seven times more volatile in the U.S.). With this greater volatility, we might expect that housing has a disproportionately large role in the business cycle.

Green (1997) has examined the role of residential and nonresidential investment in the U.S. economy over the 1959-92 period. More specifically, he tested (with quarterly data) whether these investment components caused movements in GDP or whether GDP caused movements in the investment components. He found that residential investment caused movement in GDP, not the reverse, but that GDP caused movement in nonresidential investment, rather

than the other way around. Thus actions that would temporarily depress residential investment could easily trigger a recession and those that would stimulate residential investment could unleash an inflationary boom. This suggests that one should avoid severe short-run changes in housing subsidies.

### ***Which Tenure Should Be Subsidized?***

A large body of literature has extolled the benefits of home ownership in the abstract. The positive externalities presumed to be associated with ownership include that owners better maintain their housing and neighborhoods, are better citizens in that they are more likely to support their local schools and to vote, and are superior at childraising. Fortunately, we have recently begun to see econometric tests of these presumptions (the tests are complicated in that we need to hold constant the impact on ownership of elements such as income, race, gender and educational background of parents). Kane (1994) finds that blacks are more likely to graduate from high school if their parents are homeowners and that both white and black high school graduates are more likely to enroll in college if their parents are owners. Similarly, Green and White (1997) find that children of homeowners stay in school longer than children of renters. They also report that daughters of homeowners are less likely to have children as teenagers than are daughters of renters. And DiPasquale and Glazer (1998) deduce that owners are more civic-minded. This evidence in support of the formerly just-presumed benefits of home ownership provides a rational for subsidizing it.

On the other hand, recent work by A.J. Oswald (1996) suggests that a major negative externality may be associated with ownership: more specifically higher unemployment seems to accompany/cause greater home ownership. Oswald's argument is that home owners are less mobile than private renters and thus are less willing to move to jobs when they become unemployed.<sup>55</sup> There is ample evidence that owners are less mobile, and Oswald provides an impressive array of data indicating a positive relationship between home ownership and unemployment: a 10 percentage point increase in ownership leads to a two percentage point increase in unemployment.

The data supporting this finding are both cross-sectional for countries (in both 1960 and 1990) and for regions within countries (European regions and US states) and time series for countries (changes between 1960 and 1990) and for US states (changes between 1970 and 1990). In effect, the rise in ownership in Europe since 1960 is seen to explain the rise in unemployment, and current differences in home ownership rates across countries are seen to explain much of current differences

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55 Presumably they are abnormally immobile when they have nonassumable below-market interest rates on long-term fixed-rate loans and when they have limited equity in their house (owing to price declines) and would be unlikely to remain owners if they moved.

in unemployment rates. While this large negative externality might not lead countries to favor renting housing, the unemployment effect certainly raises questions regarding the intensity with which some countries have favored ownership.

## **SECTION 4: SUMMARY**

Worldwide, the fundamental subsidy to owner-occupied housing is that the returns—imputed rents and capital gains—are very lightly, if at all, taxed. In countries allowing the mortgage interest deduction, the tax advantage is extended to lower wealth households that cannot all-equity finance their house. Most countries recognize the basic “fairness” in this extension, although many limit the deductibility for higher income households by setting a maximum on the tax rate at which the interest can be deducted, the total allowed deduction or both. Given the virtual nontaxation of owner-occupied housing, the only available way to limit the subsidy is to adopt a flatter tax rate schedule with fewer deductions.

A number of countries provide additional subsidies to owners via below-market interest rates, one-time upfront grants, or regular cash payments (housing allowances). Such subsidies, which are sometimes targeted to first-time buyers or to new construction, have been substantially reduced in Western Europe and elsewhere during the last decade, although there has been a movement to subsidizing rehabilitation in some countries. A major problem for all owner subsidies to households in urban areas is the likelihood that the subsidies are just capitalized into higher house (land) prices. Further, to the extent that the subsidy is not capitalized and thus leads to greater homeownership in a country, the work of Oswald suggests that higher unemployment will result.

The most popular rental subsidy worldwide is housing allowances targeted to lower-income households (often especially those containing children or pensioners). Some countries have subsidized new construction via below-market interest rates or, in the U.S. at times, through tax depreciation allowances that exceed economic depreciation. Here, too, the subsidization of new construction has waned during the last decade. And the targeting of housing allowances has probably increased.

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## APPENDIX: COMPUTATION OF NEUTRAL TAX DEPRECIATION LIVES

The present value of economic depreciation on a dollar of structure over its economic life is:

$$\sum_{t=1}^{\infty} \frac{d(1+d)^t(1+p)^t}{(1+r)^t} \cdot \frac{d}{r+p-d}$$

where  $d$  is the economic depreciation rate,  $p$  is the expected inflation rate, and  $r$  is the appropriate nominal discount rate. This present value is independent of inflation under the assumption of a constant real interest rate,  $r-p$ . With  $d$  equal to 0.035 and  $r-p$  also equal to 0.035, the present value of economic depreciation on a dollar of structure is \$0.5.

In contrast, the present value of tax depreciation, which is based on historic cost, varies with the inflation rate. Assuming straight-line depreciation over  $N$  years and trading (and redepreciation) at the end of the structure's tax life, the present value is:<sup>56</sup>

$$\frac{(1+r)^N - 1}{rN[(1+r)^N - (1+d)^N(1+p)^N]}$$

Setting this expression equal to \$0.5 and solving for the  $N$ 's that are consistent with various  $p$ 's, assuming that both  $r-p$  and  $d$  equal 0.035, gives the straight-line historic-cost depreciation tax life consistent with economic depreciation. Sample calculations are reported in the text.

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56 The present value is the product of the present value of straight-line depreciation over  $N$  years and an infinite sum of the form  $1+x+x^2+\dots$  where  $x=(1-d)^N(1+p)^N/(1+r)^N$ . The infinite sum equals  $1/(1-x)$ .